

# HARMONY AND ANALYSIS

---

KENNETH M. BRADLEY




SIoux CITY, IOWA





664





Digitized by the Internet Archive  
in 2024



*Stock City, Iowa.  
Preston Mary Ambrose.*

# HARMONY AND ANALYSIS

BY

KENNETH M. BRADLEY

DIRECTOR OF BUSH CONSERVATORY

CHICAGO

*FOURTH EDITION.*

PUBLISHED BY

CLAYTON F. SUMMY COMPANY

64 E. Van Buren St., Chicago, Ill.



---

Copyright, 1908, by  
KENNETH M. BRADLEY.

---

MT  
50  
B806



## PREFACE.

---

There has been no intention to offer a *Gradus ad Parnasum* for advanced students of harmony; nor has it been simply a desire to add a book to the long list of excellent works before the public.

It has been attempted to present a work which will supply the theoretical knowledge necessary to music students for practical analysis of musical composition, and to acquaint them with "Keyboard Harmony," and the fundamental principles from which the usual *rules* are derived.

Especial attention has been given to the subject of "Plural significance" of Tones, Intervals and Chords; for, when thoroughly understood, the vexing problems of key relationship and modulation are made clear.

The exercises should not be regarded from a musical standpoint, as they are given only to illustrate progressions treated in the chapters where they are introduced. The illustrations are inserted as proofs of the principles referred to. The questions at the end of each chapter will be of great assistance to the student in preparing for examinations, as they emphasize the principal subjects.

The chapter on "Other Modes," though absolutely necessary to the student in analyzing standard compositions, is brief; but further investigation will prove the importance of the subject, and also be interesting to any student.

The author recommends the "Manual of Harmony," by Bernhard Ziehn, to pupils wishing a more extended study than given in this volume.

Kenneth M. Bradley.

Chicago, June, 1908.



# CONTENTS.

Tone.  
Elements of music.  
Staff.  
Clef.  
Whole-steps and half-steps.

Intervals.

Formation of triads.

Triads of the major and minor modes.  
Primary triads.

Harmonic plural significance of tones.

Part writing.  
Compass of voices.  
Motion of voices.

Four-part writing.  
Doubling.  
Omitting the fifth.

Minor modes.  
Comparison of the modes.  
The augmented second.  
The seventh principle.

Inversions.  
Chord of the sixth.

Cadences.  
Authentic.  
Plagal.

The diminished triads.  
Ordinary resolutions.  
Four-part connections.

Sept-chords.  
Formation.  
Large, small and diminished sept-chords.  
Location of diatonic sept-chords.

Sept-chords in part writing.  
Satisfactory sept-chords.  
Dominant sept-chords.

Inversion of the sept-chords.  
Fundamental sept-chords.  
Inverted sept-chords.

Sept-chords on the leading tone ( $VII^{\circ 7}$   
and  $VII^{\circ 7^{\circ}}$  and the  $II^{\circ 7}$ ).  
Sept-chords on the  $VII$  degree.  
Resolution.

Collateral (secondary) sept-chords.  
Preparatory tones.

## INTRODUCTION.

Tetrachords.  
Diatonic major and minor scales.  
Key signatures  
Chromatic scales  
Enharmonic tones.

## CHAPTER I.

Consonances and dissonances.

## CHAPTER II.

Concords and discords.

## CHAPTER III.

Common tones.  
Secondary or collateral triads.

## CHAPTER IV.

## CHAPTER V.

Principles to be observed in part writing.  
Covered fifths and octaves.  
Tri-Tones.

## CHAPTER VI.

Sixth principle.  
Triads with satisfactory connections.

## CHAPTER VII.

Connection of the  $II^{\circ}$  and  $V$  minor.  
Connection of the  $V$  and  $VI$ .  
Discords of the minor scale.  
Triads with satisfactory connections.

## CHAPTER VIII.

Doubling of inversions.  
Chords of the four-six.

## CHAPTER IX.

Extended cadences.  
Half cadences.  
Deceptive cadences.

## CHAPTER X.

Other connections.  
Diminished triads in four-part writing.

## CHAPTER XI.

Sept-chords are discords.  
Plural significance of tones compared to  
sept-chords.

## CHAPTER XII.

Ordinary resolution.  
Doubling in sept-chords.

## CHAPTER XIII.

Resolution.  
Inverted sept-chords in cadences.

## CHAPTER XIV.

Sept-chords on the  $II$  degree of the minor.  
The diminished sept-chord.  
The diminished sept-chord in succession.

## CHAPTER XV.

Sept-chords with large sevenths.  
Ordinary resolution.



## CHAPTER XVI.

Collateral sept-chords of the minor mode. Sequence.  
Resolution. Consecutive sept-chords.

## CHAPTER XVII.

Inversion of the secondary chord of Passing sevenths.  
the seventh. The leading tone as a passing seventh.  
Resolution.

## CHAPTER XVIII.

Deceptive cadences. Sevenths descending, remaining station-  
Irregular resolution of the collateral ary, ascending.  
sept-chords. Interrupted sevenths.

## CHAPTER XIX.

Embellishments, or ornamental tones. Mordant.  
Passing tones. Turn.  
Ornamental tones in two or more parts. Interrupted alternating tones.  
Appoggiatura. Retardation.  
Double appoggiaturas. Anticipation.  
Alternating tones. Suspensions.  
Trill.

## CHAPTER XX.

Chords of the 9th, 11th and 13th. Ordinary resolution.  
Application. Inversions.

## CHAPTER XXI.

Melodies.

## CHAPTER XXII.

Harmonizing melodies.

## CHAPTER XXIII.

Exercises to be harmonized.

## CHAPTER XXIV.

Half-step progressions.

## CHAPTER XXV.

Altered chords. Major and minor triads as altered chords.  
The augmented triad as an altered chord.

## CHAPTER XXVI.

The chromatic chord. Augmented four-six.  
Resolution tones. Augmented five-six.  
Augmented sixths (double diminished). Sound of an augmented five-six.

## CHAPTER XXVII.

Suspensions. Suspensions in two or three parts.  
Preparation and resolution. Suspensions from below.  
Intervals forming suspensions. Interruption.  
Retained. Unprepared, unresolved.

## CHAPTER XXVIII.

Analysis.

## CHAPTER XXIX.

Modulation, perfect and imperfect. Tonic related keys.  
Chords which establish a key. Mediating chords.  
Related keys. Modulation by triads, sept-chords, chro-  
Means employed. matic chords, enharmonic changes and  
Principles to be observed. sequences.

## CHAPTER XXX.

Cross relation.

## CHAPTER XXXI.

Organ point.

## CHAPTER XXXII.

Other modes. Scotch.  
Ecclesiastical modes. Hungarian.

# INDEX.

## A

	Sec.		Sec.
Accidental chord formation . . .	154	Conjunct motion . . . . .	39
Accidental diatonic chords . . . .	154	Connected sept-chords . . . . .	120
Aeolian modes . . . . .	222, 224	Connection of triads:	
Altered chords . . . . .	172, 173, 174, 176	II-V . . . . .	50
Alternating tones . . . . .	139	II <sup>0</sup> -V . . . . .	61
Analysis . . . . .	194	V-VI . . . . .	62
Anticipation . . . . .	145	Consonances . . . . .	12
Appoggiatura . . . . .	137	Covered fifths . . . . .	44
Augmented seconds . . . . .	5, 9, 35	Covered octaves . . . . .	45
Augmented thirds . . . . .	179	Cross relations . . . . .	214
Augmented triads . . . . .	19, 35, 64,		
	169, 173		
Authentic mode . . . . .	222		

## C

Cadences . . . . .	79	Diatonic half-steps . . . . .	7
Authentic . . . . .	80, 84, 85	Diminished sept-chords . . . . .	96, 111, 112
Deceptive . . . . .	86, 124	Diminished triads . . . . .	
Imperfect . . . . .	82	18, 34, 65, 87, 88, 89, 90, 91	
Perfect . . . . .	82	Discords . . . . .	21, 63, 98
Plagal . . . . .	81	Disjunct motion . . . . .	39
Chart for related keys . . . . .	201	Dissonances . . . . .	12
Chords . . . . .	13	Dominant sept-chords . . . . .	
of the ninth . . . . .	148, 153	97, 101, 104, 170, 183	
of the eleventh . . . . .	154	Dorian modes . . . . .	222, 224
of the thirteenth . . . . .	154	Double appoggiaturas . . . . .	138
which establish a key . . . . .	200	Double diminished chord . . . . .	179
Chromatic . . . . .	177	Doubling . . . . .	51, 52, 55, 73, 75, 76, 103
Augmented 3-4-6 . . . . .	181		
Augmented 5-6 . . . . .	182		
Augmented 6-chord . . . . .	179		
Chromatic half-steps . . . . .	7, 8		
Collateral sept-chords . . . . .	113		
Collateral triads . . . . .	27		
Common tones . . . . .	25		
Compass of voices . . . . .	37		
Concords . . . . .	21		

## D

## E

## F

Four-part writing . . . . .	68
Four-six chord . . . . .	77, 78
Fundamental . . . . .	14, 74
Fundamental chords . . . . .	71



## H

	Sec.
Half-step connection of sept-chords .....	170, 171
Half-step connection of triads.....	169
Half-step progressions .....	168
Half-step progressions in modulation . . . . .	207
Harmonic plural significance of a tone.....	28, 29, 30, 99
Harmonic plural significance of thirds .....	31, 99
Harmonic plural significance of chords .....	32, 35, 99
Hungarian music .....	226

## I

Interrupted altered tones.....	143
Interrupted suspensions.....	192
Intervals .....	1
Altered.....	4, 9
Augmented.....	9
Diminished.....	9
Harmonic.....	2
Large .....	6
Melodic.....	2
Natural .....	4
Numerical.....	3
Perfect .....	6
Small.....	9
Intervals forming suspensions ..	186

## Inversions:

Intervals .....	5, 10
Triads.....	20, 70
Sept-chords.....	104, 121

## Inversions of the chord of the

ninth.....	153
Ionian mode.....	222
Irregular resolution of sept-chords	133

## L

Large sept-chords.....	94, 115
Leading tones.....	
Introduction, 43, 54, 123	
Location of intervals .....	11
Location of sept-chords.....	97, 195
Location of triads .....	35, 195
Lydian modes .....	222, 223, 224

## M

	Sec.
Major and minor triads as altered chords .....	174, 175, 176
Major modes.....	Introduction, 22
Major triads.....	16, 32, 169, 174, 175, 176
Means employed in modulation..	203
Mediating chords .....	205
Melody .....	155
Minor modes .....	58
Minor triads .....	17, 33, 169, 176
Mixolydian modes .....	222, 223, 224
Modulation.....	197
by means of common tones.....	201
by means of enharmonic changes .....	212
by means of triads ....	206
by half-step progressions	207
through chromatic chords .....	211
through diminished sept-chords .....	210
through dominant sept-chords .....	208
through sequences ....	213
through small diminished sept-chords..	209
Motion of voices .....	38
Motive .....	157, 158

## O

Omitting the fifth.....	53
Organ point .....	216
Other modes .....	221

## P

Parts of a melody .....	157
Passing sevenths .....	122
Passing tones.....	135
Phrygian modes .....	222, 223, 224
Plagal modes .....	222
Position of a triad... ..	20
Preparatory tones .....	114, 185
Primary triads .....	24
Principles to be observed in modulation .....	203





# INTRODUCTION.

---

## 1. Tones.

A *Tone* is a sound of regular vibrations.

A tone has three qualifications: *Pitch*, *Quality* and *Quantity*.

*Pitch* is determined by the number of vibrations. The faster the vibration, the higher the tone.

Tones may have the same pitch, but differ in character, as the violin differs from the piano, organ, voice, etc. This difference is called *Quality*.

By *Quantity* is meant the duration of a tone, not volume. Stringed instruments have more quantity than most percussion instruments.

## 2. Elements of Music.

The chief elements of music are *Rhythm*, *Melody* and *Harmony*.

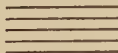
*Rhythm* is the regular recurrence of accent.

*Melody* is the combination of tones sounded in succession, *according to the rules of rhythm*.

*Harmony* is the combination of two or more tones sounded simultaneously.

## 3. Staff.

The *Staff* is composed of five lines and four spaces, and is used to write the notes upon.



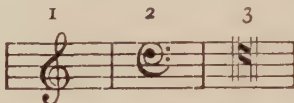
Any one of the lines or spaces is a *Staff-degree*. The lowest line is the first staff degree, the first space is the second staff degree, and the second line is the third staff degree, etc.

A *Note* represents the duration of a tone.

#### 4. Clefs.

The *Clef* is the character placed at the first of the staff, and determines the pitch of the notes upon the staff.

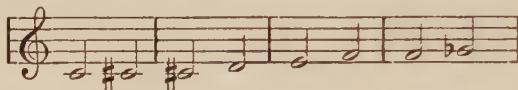
There are three clefs:—the "G," "F," and "C."



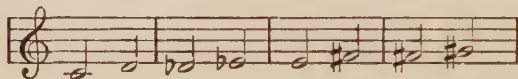
- (1) The "G" clef represents the first G above middle C.
- (2) The "F" clef represents the first F below middle C.
- (3) The "C" clef, a movable clef, represents middle C.

#### 5. Whole-steps and Half-steps.

From one tone to the next above forms a *Half-step*.



From one tone to the second above forms a *Whole-step*.



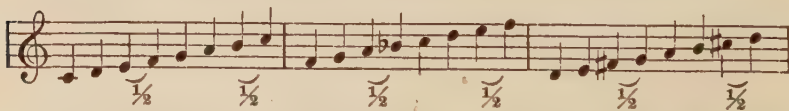
#### 6. Tetrachords.

A *Tetrachord* consists of two whole-steps and one half-step.



#### 7. The Diatonic Major Scale.

A *Diatonic Major Scale* (Latin *scala*, to climb,) consists of a succession of eight tones, so arranged as to form whole-steps between all adjoining degrees, excepting the steps between the third and fourth, and seventh and eighth, where half-steps occur.



**REMARKS.**—The eighth tone is only a repetition of the first, an octave higher, where the succession re-commences. The term "diatonic" means through all the staff-degrees in succession.

Half of a major scale forms a tetrachord, as from C to F is one tetrachord, and G to C, the upper half, forms another tetrachord. There is but one form of the major scale, i. e. It consists of two whole-steps and one half-step, three whole-steps and one half-step, or two tetrachords.



## 8. Scale Degrees.

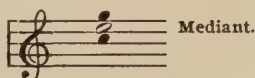
The first degree is called the *Tonic* or key note. Tonic is from the Latin *tonica*, meaning tone, i. e., the principal tone upon which the scale is built.

The next in importance after the tonic, is the fifth, called the *Dominant*. The dominant is the first of the second tetrachord, and has a decided influence upon the key.

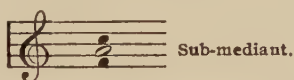
The fourth degree is called the *Sub-dominant*, as it lies the same distance below the tonic as the dominant is above the tonic.



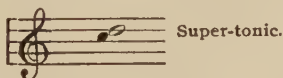
The third degree is called the *Mediant*, as it is midway between the tonic and the dominant.



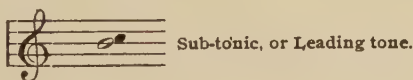
The sixth degree is called the *Sub-median*, as it is midway between the sub-dominant and the tonic.



The second degree is called the *Super-tonic*, as it is above the tonic.



The seventh degree is called the *Sub-tonic* or *Leading Tone*, as it leads into the tonic.



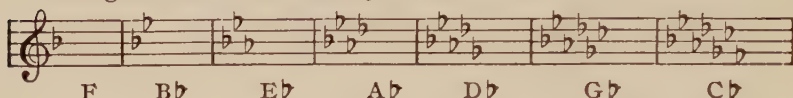
## 9. Key Signature.

By *Key Signature* is meant the number of sharps or flats placed at the first of a staff, which help indicate the scale or key of the composition. Signatures are the result of the construction of the scale, and not the cause of the scale.

The signatures of the different sharp keys are as follows:



The signatures of the flat keys are as follows:

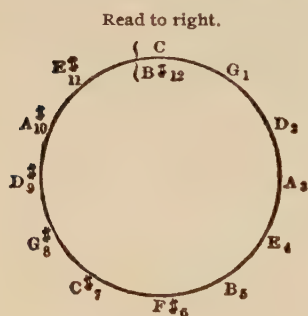


## 10. Circle of Scales.

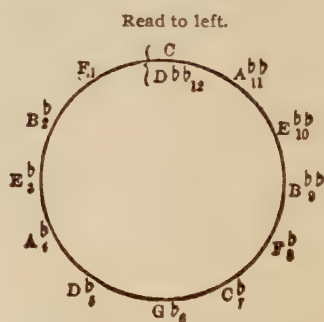
By using the fifth degree of one scale as the first of the next, it will be noticed that each successive scale will have one more sharp than the one before it; e. g., C has no sharp; G has one sharp; D has two sharps; etc. This succession continues until B $\sharp$  is reached; as this note corresponds to C natural, the circle of sharps may be considered complete.

In the above succession of scales the altered note is always the leading tone, or the seventh degree.

By using the fourth degree of any scale as the first of the next, another circle can be formed by flatting the fourth of each successive scale, e. g., C has no flats; F (the fourth of C) has one flat; B $\flat$  has two flats; E $\flat$  has three flats; etc.



The figures represent the number of sharps.



The figures represent the number of flats.

Only twelve major scales are commonly employed.

Keys having more than six sharps or six flats are changed to the corresponding enharmonic scale, i. e., D $\flat$  (five flats) instead of C $\sharp$  (7 sharps), and B (5 sharps) instead of C $\flat$  (7 flats).

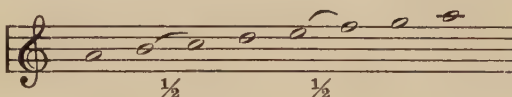


## 11. Diatonic Minor Scale.

The *Diatonic Minor Scale* has three forms, which are called the *Aeolian Minor*, the *Melodic Minor* and the *Harmonic Minor*.

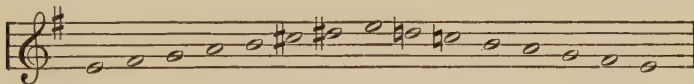
The *Aeolian Minor* scale has the same tones as its relative major, i. e., the major scale with the same signature. The tonic or key note of the minor scale corresponds to the sub-median, or sixth degree of its relative major. The difference is in the order of whole-steps and half-steps. In the Aeolian minor scale the half-steps occur between the second and third, and the fifth and sixth degrees.

The scale of A minor has the same signature as C major.



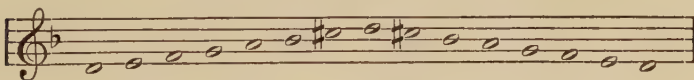
In the *Melodic Minor* scale, the sixth and seventh degrees are chromatically raised in the ascending scale; while in the descending progression they are lowered the same as in the Aeolian minor.

E minor has the same signature as G major.



The *Harmonic Minor* scale has the seventh only raised, ascending and descending.

D minor has the same signature as F major.



There are other formations sometimes used; they are called *Mixed Forms*.

## 12. Chromatic Scale.

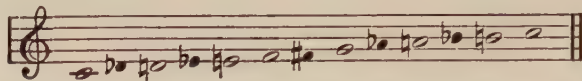
The *Chromatic Scale* is composed entirely of half-steps, and includes all the half-steps within the octave. The name is from the Latin *chromo*, meaning color. In the chromatic scale all the tone colors within the octave are employed.

There are two forms of *Chromatic Scales*, the *Harmonic* and *Melodic*.

In the *Harmonic Chromatic Scale*, based upon the *Major Mode*, the first and fifth (tonic and dominant) remain unaltered; the second, third, sixth and seventh are lowered, then restored, and the fourth is raised.

In the following example the diatonic tones are indicated by open notes, and the altered or chromatic tones are indicated by closed notes,

### C major Chromatic.



In the *Harmonic Chromatic Scale*, based upon the *Minor Mode*, the first and fifth (tonic and dominant) are unaltered, the second and seventh are lowered, and the third, fourth and sixth are raised.

### C minor Chromatic.

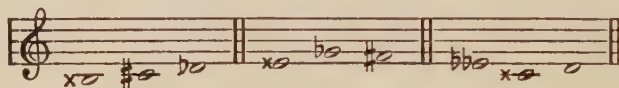


In harmony the harmonic minor scale is always used, unless the other forms are mentioned. In the example given,  $b\sharp$  is the diatonic tone.

All other notations given to chromatic scales are only Melodic Progressions, and are for this reason called Melodic Chromatic Scales.

## 13. Enharmonic Tones.

Tones differing in notation, but the same in pitch, i. e., the same to the ear, but different to the eye, are *Enharmonic* equivalents.



With the exception of  $G\sharp-A\flat$ , every tone receives three notations, as:  $C\sharp$ ,  $D\flat$ ,  $B^*$ , or  $D$ ,  $C^*$ ,  $E\flat$ . The scale of  $C\sharp$  major can be changed enharmonically to  $D\flat$  major. Mathematically they are slightly different.

Every degree of the staff may have five different degrees of pitch, as:  $D$ ,  $D\sharp$ ,  $D^*$ ,  $D\flat$ ,  $D\flat\flat$ .

## QUESTIONS.

1 What is a tone? Define each of its qualifications. 2 Define the chief elements of music. 3 What is a staff? What is a staff-degree? 4 What is a clef? How many clefs are there? 5 What is the difference between a whole-step and a half-step? 6 What is a tetrachord? 7 What is a diatonic major scale? 8 What names are given to the scale degrees? 9 What is a key signature? 10 What is understood by the "Circle of Scales"? 11 What is a diatonic minor scale? Give the different forms of the minor modes. 12 Describe the chromatic scale. 13 What is meant by enharmonic changes?

## EXERCISE.

Write all major scales and their relative melodic and harmonic scales. Begin ear drills. (See page 161.)

# HARMONY AND ANALYSIS.

## Chapter I.

### INTERVALS.

#### 1. Intervals.

An *Interval* is formed by two tones.

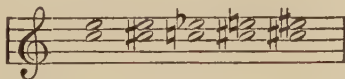
Intervals are counted upward, i. e., by referring to the interval C to B, it is from C to B above. The lower tone, i. e., the first named, is the fundamental and the other tone is the interval.

#### 2. Harmonic and Melodic Intervals.

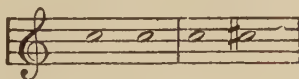
Intervals may occur in two ways. The two tones may be sounded simultaneously, or in succession. If the two tones are sounded simultaneously, the interval is *Harmonic*. If the two tones are sounded in succession, the interval is *Melodic*.

#### 3. Numerical Intervals.

Intervals are classified numerically according to the number of staff-degrees, as each degree of the staff represents a letter of the alphabet from A to G in succession. Intervals may be classified numerically according to the number of letters, as C to E is a *Third*, C third space and E fourth space, with one staff-degree representing D between, which is always a third, no matter how the C or E be altered chromatically. Each of the following intervals are different, though they always remain a third.



Two tones upon one staff-degree are called a *Prime*:



Likewise, C to G is a *Fifth*, D to G is a *Fourth*, G to A is a *Second*.

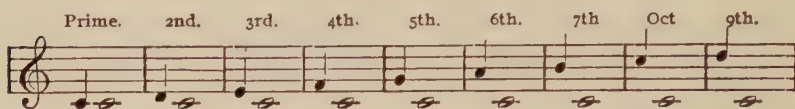
While the numerical classification of intervals is fixed, the distance between the fundamental and the interval may be changed, and more definite classification is necessary.



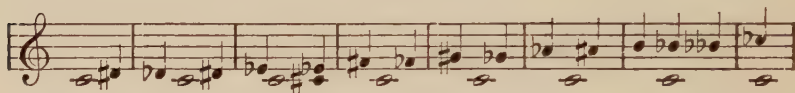
#### 4. Natural and Altered Intervals.

Intervals are divided into two general classes, *Natural* and *Altered*.

If the fundamental of an interval is considered as a tonic of a major scale, and the upper tone belongs to the scale, the interval is *Natural*. Each of the following intervals are natural.

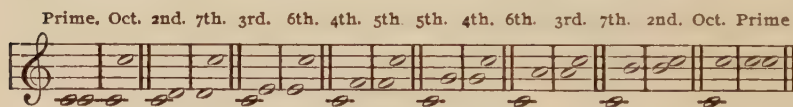


If the fundamental is considered as a tonic of a major scale, and the upper tone is foreign to the scale, the interval is *Altered*. Each of the following intervals are altered.



#### 5. Inversion of Intervals.

The position of the two tones forming an interval can be changed by the fundamental being placed an octave higher, or the interval or upper tone an octave lower. Such a change is called *Inversion*.



From the above it will be noticed that primes become octaves by inversion.

Seconds become sevenths by inversion.

Thirds " sixths " "

Fourths " fifths " "

Fifths " fourths " "

Sixths " thirds " "

Sevenths " seconds " "

Octaves " primes " "

#### 6. Perfect and Large Intervals.

Natural intervals are divided into two classes, *Perfect* and *Large*.

A *Perfect* interval is a natural interval that remains natural by inversion.

A *Large* interval is a natural interval that becomes an altered interval by inversion.

	Prime.	2nd.	3rd.	4th.	5th.	6th.	7th.	Oct.
Original.								
	Oct.	7th.	6th.	5th.	4th.	3rd.	2nd.	Prime.
	Nat.	Alt.	Alt.	Nat.	Nat.	Alt.	Alt.	Nat.
Inversion.								

From the above it will be noticed that natural primes become natural octaves; natural fourths become natural fifths; natural fifths become natural fourths; and natural octaves become natural primes; so natural primes, fourths, fifths and octaves are perfect intervals.

In the above example it must also be observed that the altered seventh, sixth, third and second, which result by inverting the natural second, third, sixth and seventh, each of these Altered Intervals are smaller than Natural Intervals, as in each case  $C^\sharp$  would be the natural interval. For this reason the original (the natural) second, third, sixth and seventh are called *Large Intervals*.

## 7. Chromatic and Diatonic Half-steps.

Having learned that any two adjoining tones form a half-step,—as C, C-sharp; C, D-flat; E-flat, E-natural; or D-sharp, E,—it will be seen that while the two intervals of C, C-sharp, and C, D-flat, sound the same, the notation is different. If a half-step is formed on two adjoining staff-degrees,—as C, D-flat; D-sharp, E; E, F; etc.,—the interval is a diatonic half-step. Such half-steps occur in all diatonic scales. If a half-step is formed on one staff-degree,—as C, C-sharp; D-flat, D-natural; E-flat, E-natural; etc.,—it is a chromatic half-step, as it is possible to form such half-steps in chromatic scales only, and by the use of chromatic signs.

## 8. The Smallest Interval.

The *chromatic* half-step is the smallest interval.

While the perfect primes are used in the table of intervals, they are not intervals; as an interval demands a difference in pitch, and perfect primes are unisons. On a keyed or fretted instrument, such as a piano, organ, mandolin, etc., there is no difference between the intervals of a chromatic and diatonic half-step. However, strictly speaking, there is a difference, as can be proven by violins, trombones and voice. The chromatic half-step is smaller than the diatonic half-step.

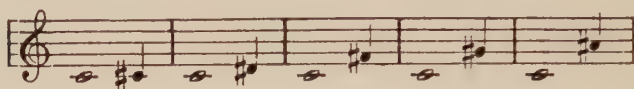
## 9. Altered Intervals.

There are three altered intervals, *Augmented*, *Small*, and *Diminished*.

An *Augmented* interval is one chromatic half-step greater than a natural interval.

As C, D-sharp is greater than the natural second, C, D; C, F-sharp is greater than the natural fourth, C, F. All natural intervals can be augmented. Natural thirds, sevenths, and octaves are not practical to augment. They have no harmonic value though they are sometimes used. Augmented thirds and sevenths are compared enharmonically the same as perfect fourths and octaves, while an augmented octave has the same value as an augmented prime.

#### Augmented Intervals:



A *Small* interval is one chromatic half-step *smaller* than a large interval. A large interval can be changed into a small interval either by raising the lower tone or lowering the upper tone one chromatic half-step.

#### Small Intervals:



A *Diminished* interval is one chromatic half-step *less* than a perfect or small interval.

All intervals can be diminished. The diminished seconds, sixths and ninths have no harmonic value. A diminished second enharmonically is the same as a perfect prime, and a diminished ninth is the same enharmonically as a perfect octave. The same is true of a diminished sixth as compared with a perfect fifth. The diminished sixth is sometimes used by raising the lower tone of a minor and using it as a passing tone.

### 10. Table of Intervals and Inversions.

	Primes.		2nds.			3rds.			4ths.		
	Perfect.	Aug.	Large.	Sm.	Aug.	Lar.	Sm.	Dim.	Per.	Dim.	Aug.
Original.											
Inversion.											
	Perfect.	Dim.	Sm.	Lar.	Dim.	Sm.	Lar.	Aug.	Per.	Aug.	Dim.



	5ths.			6ths.			7ths.			Octaves.	
	Perfect.	Dim.	Aug.	Lar.	Sm.	Aug.	Lar.	Sm.	Dim.	Perf.	Dim.
Original.											
Inversion.											
	Perfect.	Aug.	Dim.	Sm.	Lar.	Dim.	Sm.	Lar.	Aug.	Perf.	Aug.

From the above it will be noticed that perfect intervals remain perfect by inversion, also that

Large	intervals become	small	by inversion.
Small	"	"	large
Augmented	"	"	diminished
Diminished	"	"	augmented

## 11. Location of Intervals in Major and Minor Modes.

A *Perfect Prime* (one tone) belongs to fourteen scales. (See Article 28, Page 28.)

An *Augmented Prime* does not occur as a diatonic interval. Enharmonically it corresponds to a small second.

A *Small Second* occurs between the third and fourth, and seventh and eighth of a major scale, and between the second and third, fifth and sixth, and seventh and eighth degrees of the minor, e. g.; D-E $\flat$  are in B $\flat$  and E $\flat$  major, and in c, g and e $\flat$  minor.

(*Capital letters indicate major modes, and small letters indicate minor modes.*)

In locating intervals, it is sometimes necessary to change the tones of the intervals enharmonically, e. g.; the Small Second C-D $\sharp$  would be called B $\sharp$ -C $\sharp$  in C $\sharp$  minor, instead of C-D $\sharp$  in d $\flat$  minor, as the latter is not a practical scale.

A *Large Second* occurs between the first and second, second and third, fourth and fifth, fifth and sixth, and sixth and seventh of the major scale, and between the first and second, third and fourth, and fourth and fifth of the minor scale, e. g.; D-E is in D, C, A, G and F major, and in d, b and a minor.

An *Augmented Second* occurs between the sixth and seventh degrees of a minor scale only, e. g.; D-E $\sharp$  is in f $\sharp$  minor.

NOTE:—In finding the location of diatonic intervals it must be observed that each group will make a total of fourteen; as in the case of the seconds, the Small Second will occur in five keys, a Large Second in eight keys, and an Augmented Second in one.

An *Augmented Second* corresponds enharmonically to a small Third.

A *Small Third* occurs between the second and fourth, third and fifth, sixth and first, and seventh and second of a major scale, and between the first and third, second and fourth, fourth and sixth, and seventh and second of a minor scale, e. g.; D-F is in C, B $\flat$ , F and E $\flat$  major, and in d, c, a and e $\flat$  minor.

A *Large Third* occurs between the first and third, fourth and sixth, and fifth and seventh of a major scale, and between the third and fifth, fifth and seventh, and sixth and first of a minor scale, e. g.; D-F $\sharp$  is in D, A and G major, and b, g and f $\sharp$  minor.

**TEACHER'S NOTE:**—Experience has taught that it is best to teach the location of the following intervals after Chapter 4, and begin by teaching the location of the fifths. As the Perfect fifths will be found on the same degrees as the major and minor triads, and the diminished upon the degrees where the diminished triads occur, and the augmented where the augmented triad occurs.

A *Large Third* corresponds enharmonically to a *Diminished Fourth*.

A *Diminished Fourth* occurs only upon the seventh of a minor, e. g.; D-G $\flat$  is in e $\flat$  minor.

A *Perfect Fourth* occurs upon the first, second, third, fifth, sixth and seventh of a major mode, and upon the first, second, third and fifth of a minor mode, e. g.; D-G is in D, C, B $\flat$ , G, F and E $\flat$  major, and in d, c, b and g minor.

An *Augmented Fourth* occurs upon the fourth of a major and the fourth and sixth of a minor, e. g.; D-G $\sharp$  is in A major, and in a and f $\sharp$  minor.

An *Augmented Fourth* corresponds enharmonically to a *Diminished Fifth*.

A *Diminished Fifth* occurs upon the seventh of the major and the second and seventh of a minor, e. g.; D-A $\flat$  is in E $\flat$  major, and in c and e $\flat$  minor.

A *Perfect Fifth* occurs upon the first, second, third, fourth, fifth and sixth degrees of a major mode, and upon the first, fourth, fifth and sixth of a minor mode, e. g.; D-A is in D, C, B $\flat$ , A, G and F major, and in d, a, g and f $\sharp$  minor.

An *Augmented Fifth* occurs on the third of a minor, e. g.; D-A $\sharp$  is in b minor.

An *Augmented Fifth* corresponds enharmonically to a *Small Sixth*.

A *Small Sixth* occurs on the third, sixth and seventh degrees of the major, and the first, fifth and seventh of a minor, e. g.; D-B $\flat$  is in B $\flat$ , F and E $\flat$  major, and d, g and e $\flat$  minor.

A *Large Sixth* occurs on the first, second, fourth and fifth of the major, and the second, third, fourth and sixth of a minor, e. g.; D-B is in D, C, A and G major, and c, b, a and f $\sharp$  minor.

A *Large Sixth* corresponds enharmonically to a *Diminished Seventh*.

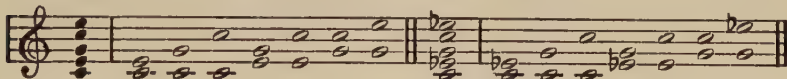
A *Diminished Seventh* is only on the seventh degree of the minor scale, e. g.; D-C $\flat$  is in e $\flat$  minor.

A *Small Seventh* is on the second, third, fifth, sixth and seventh of a major, and the second, fourth and fifth of a minor, e. g.; D-C is in C, B $\flat$ , G, F and E $\flat$  major, and c, a and g minor.

A *Large Seventh* is found on the first and fourth of a major, and the first, third and sixth of a minor, e. g.; D-C $\sharp$  is in D and A major, and d, b and f $\sharp$  minor.

## 12. Consonant and Dissonant Intervals.

A *Consonant Interval* is one that requires no resolution; a *Dissonant Interval* requires a resolution.



A composition could close with either of the chords in the above illustration. These two chords contain large and small thirds, and large and small sixths, perfect fourths, fifths and octaves. These are the Consonant Intervals; all other Intervals are Dissonant, i. e., all augmented and diminished, and all Seconds and Sevenths.

## QUESTIONS.

1 What is an interval? How are intervals counted? What are the two tones forming an interval called? 2 What is the difference between a melodic and harmonic interval? 3 What is the first classification of an interval? 4 What is a natural interval? What is an altered interval? 5 How is an interval inverted? What is the change? 6 What is a perfect interval? What is a large interval? 7 What is a chromatic half-step? What is a diatonic half-step? 8 What is the smallest interval? 9 What are the altered intervals? What is an augmented interval? What is a small interval? What is a diminished interval? 10 Are perfect intervals changed by inversion? How are augmented, diminished, large and small intervals changed by inversion? 11 Where are the following intervals found in the major and minor scale?

1 Perfect primes; 2 Large, small and augmented seconds; 3 Large and small thirds; 4 Perfect, augmented and diminished fourths; 5 Perfect, augmented and diminished fifths; 6 Large and small sixths; 7 Large, small and diminished sevenths.

Do augmented primes, diminished thirds, augmented sixths, or diminished octaves occur as diatonic intervals?

Give the corresponding intervals by enharmonic changes to augmented primes, augmented seconds, large and small thirds, diminished and augmented fifths, small and augmented sixths, and diminished, small and large sevenths.

12 What is a consonant interval? Which intervals are consonances? What is a dissonant interval? Which intervals are dissonances?

## EXERCISE.

Write table of intervals in the keys of E and E-flat major.  
Introduce ear drills for seconds and thirds.



## Chapter II.

### FORMATION OF TRIADS.

#### 13. Chords.

Scales are composed of seconds.

*Chords* are composed of two or more thirds.



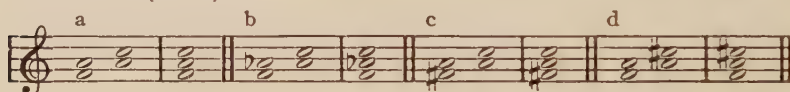
#### 14. Fundamental.

The tone upon which the first third is based is the *Fundamental* or *Root*, as C is the fundamental or root of each of the above chords.

#### 15. Triads.

A *Triad* consists of two thirds.

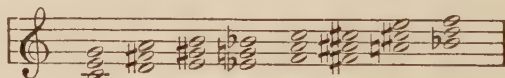
Diatonic chords are composed of diatonic thirds. As all diatonic thirds are either large or small thirds (a), diatonic triads can be composed of two large thirds (a), or two small thirds (b), or one large and one small third. When the triad is composed of one large and one small third, the lower third can be either the large or small third (c & d).



Each of the above examples form triads, containing two thirds, although the thirds are different and give a different character to the chords. In example (a) the fundamental third is large and the upper third is small. The two thirds form a perfect fifth. The same is true of example (b), only the order of the third is changed. In example (b) the fundamental third is small and the upper third is large. In example (c) both thirds are small, while in example (d) both thirds are large.

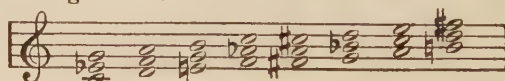
#### 16. Major Triads.

A *Major Triad* consists of a fundamental, a large third and a perfect fifth; or two thirds, the fundamental third being a large third and the upper third a small third.



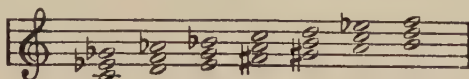
#### 17. Minor Triads.

A *Minor Triad* consists of a fundamental, a small third and a perfect fifth; or two thirds, the lower third being a small third and the upper third a large third.



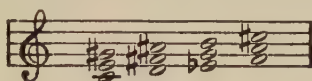
## 18. Diminished Triads.

A *Diminished Triad* consists of a fundamental, a small third and a diminished fifth, or two small thirds.



## 19. Augmented Triads.

An *Augmented Triad* consists of a fundamental, a large third and an augmented fifth, or two large thirds.



## 20. Positions of a Triad.

There are *six* possible ways of arranging the three tones of a triad.

If the fundamental is the lowest tone it is called a *Fundamental Position*, and if the upper tones are arranged so that the intervals form a fundamental third and fifth, it is called a *Fundamental Close Position*. (Ex. a.) If the third is above the fifth, it is called a *Fundamental Dispersed Position*. (Ex. b.)

If the third is in the bass, and the fundamental is above the fifth, the order of the interval is so changed that, in the new formation, the third of the chord becomes the first in the order of intervals, the fifth becomes the third, and the fundamental is a sixth above the third. This is called the *First Inversion Close Position*, or a *Sixth Chord Close Position*. (Ex. c.)

When the third is in the bass, and the fifth is above the fundamental, it is still called a first inversion, or a sixth chord, but the position is *Dispersed*. (Ex. d.)

When the fifth is in the bass, and the third is above the fundamental, the order of intervals is so changed that the fifth of the chord becomes the first in the order of intervals. The fundamental is the fourth above the original fifth, and the third is the sixth above the fifth. This is called the *Second Inversion* or *Four-six Chord Close Position*. (Ex. e.)

When the fifth is in the bass, and the fundamental is above the third, it is a *Second Inversion*, or a *Four-six Chord Dispersed*. (Ex. f.)

Fundamental.		1st Inversion.		2nd Inversion.	
a	b	c	d	e	f

Close.	Dispersed.	Close.	Dispersed.	Close.	Dispersed.
--------	------------	--------	------------	--------	------------

## 21. Concords and Discords.

If a chord is composed of consonant intervals only, it is a *Concord*.

All major and minor triads are concords, as the intervals of a major or minor triad form large and small thirds, perfect fifths, and octaves; or, if inverted, small and large sixths, and perfect fourths.

If a chord contains one or more dissonances, it is a *Discord*.

Diminished and augmented triads are discords, as diminished and augmented fifths are dissonant intervals.

### QUESTIONS.

- 13 What is a chord? What is a fundamental or root? Of what are chords composed?
- 14 What is the fundamental of a chord?
- 15 What is a triad? How many kinds of diatonic triads are there?
- 16 What is a major triad?
- 17 What is a minor triad?
- 18 What is a diminished triad?
- 19 What is an augmented triad?
- 20 How many positions of a triad are there? What is meant by fundamental close position? What is meant by fundamental dispersed position? What is meant by first inversion, or sixth chord close position? What is meant by first inversion, or sixth chord dispersed position? What is meant by a second inversion, or four-six chord close position? What is meant by a second inversion, or four-six chord dispersed position?
- 21 What is a concord? What triads are concords? What intervals are found in major and minor triads? What is a discord? What triads are discords?

### EXERCISE.

Form major, minor, augmented and diminished triads upon all the staff-degrees.

Give examples of major, minor, augmented and diminished triads in their six possible positions.

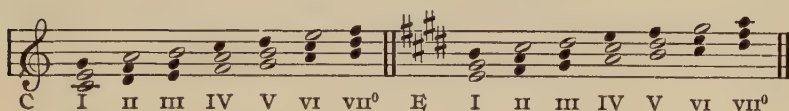


## Chapter III.

### TRIADS OF THE MAJOR AND MINOR MODES.

#### 22. Triads of the Major Scale.

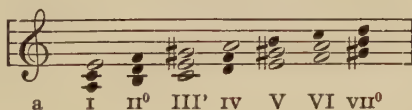
By adding a third and fifth (two thirds) to each tone of the major scale, it will be noticed that upon the first, fourth and fifth degrees of the major scale, the major triads will be formed; upon the second, third and sixth degrees, minor triads will be formed; and upon the seventh degree, a diminished triad will be formed.



The open notes indicate large thirds, and the closed notes small thirds. Major keys are indicated by capital letters; major triads by large Roman numerals; minor keys by small letters, and minor triads by small Roman numerals; augmented triads by large Roman numerals followed by an apostrophe; and diminished triads are indicated by small Roman numerals with a cipher.

#### 23. Triads of the Minor Scale.

By adding a third and fifth to each degree of the harmonic minor scale, major triads will be formed upon the fifth and sixth degrees; minor triads upon the first and fourth degrees; diminished triads upon the second and seventh degrees; and an augmented upon the third degree.

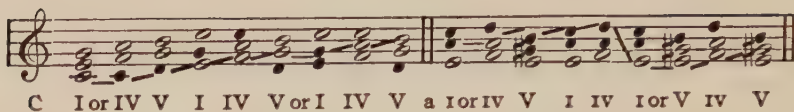


#### 24. Primary Triads.

The tonic triad is the principal triad of the scale, and next in importance after the tonic, are the dominant and sub-dominant. These three are the principal triads of the major and minor modes. They are called *Primary Triads*.

In the major mode they are major triads, while in the minor mode, the dominant is major, but the tonic and sub-dominant are minor.

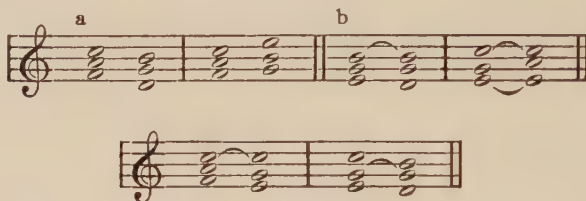
The Primary triads are the most important, as they definitely establish the tonality of a scale; i. e., each tone of a scale can be found in one of the three triads, and the entire scale can be harmonized without the use of other chords.



## 25. Common Tones.

When a tone is found in two connecting triads, it is called a *Common Tone*.

Triads on adjoining degrees have no common tone, as the triads of F and G, or E and F, have no common tone (a). Triads a third apart have two common tones, as E and G are common to the triad of C and E (b), and C and E are common to the triad of A and C. Triads a fourth apart have one common tone (c).

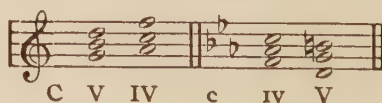


## 26. The Relation of Primary Triads.

Triads a fourth or a fifth apart have one common tone. This gives a natural connection of one tone between the Primary triad; i. e., there is a common tone between the tonic and dominant, and the tonic and sub-dominant. The fifth of the tonic is the first of the dominant (a), and the first of the tonic is the fifth of the sub-dominant (b).



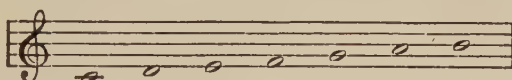
The sub-dominant and dominant triads have no common tone.



## 27. Secondary Triads, or Collateral Triads.

In selecting appropriate triads for harmonizing given tones of a scale, the primary triads are most frequently employed. The other triads (II-III-VI-VII<sup>0</sup>) are called *Secondary* or *Collateral Triads*. Of these the II and VI is most often used and the III is seldom used, and the VII<sup>0</sup> is rarely used in a fundamental position.

In the following illustration the first line (a) of numerals indicates the chord most frequently employed with the tone of the scale above it. The second line (b) is next in importance, and the third line is sometimes used.



(a)	I	V	I	IV	V	IV	V
(b)	IV	II	VI	II	I	VI	III
(c)	VI	VII	(III)	VII	(III)	II	VII

In the major modes, the triads upon the second, third and sixth degrees are minor, and the one on the seventh degree is diminished (a). In the minor modes, the triads on the second and seventh are diminished, the third is augmented, and the sixth is major (b).

a	b
C I II III IV V VI VII <sup>0</sup>	c I II <sup>0</sup> III' IV V VI VII <sup>0</sup>

## QUESTIONS.

- 22-23 Where do the major triads occur in the major mode? Where do the major triads occur in the minor mode? Where do the minor triads occur in the major mode? Where do the minor triads occur in the minor mode? Where do the diminished triads occur in the major mode? Where do the diminished triads occur in the minor mode? Where do the augmented triads occur?
- 24 Which triads are the primary triads, and what are they called?
- 25 What is a common tone? What triads have no common tones? What triads have two common tones?
- 26 What triads have one common tone? What is the common tone connection between the primary tones?
- 27 What are the collateral triads, and why so called?

## EXERCISE.

Form the triads upon all the degrees of D, E, and A-flat major; E, F, and B-flat minor.



## Chapter IV.

### HARMONIC PLURAL SIGNIFICANCE OF A TONE.

#### 28. Any Tone May Belong to Fourteen Scales.

A tone can be regarded as a first, second, third, fourth, fifth, sixth or seventh of a major scale or minor scale, so a tone belongs to fourteen scales.

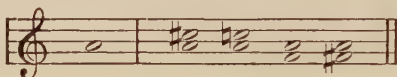
C can be the tonic of C major or c minor; the second of B-flat major or b-flat minor; the third of A-flat major or a minor; the fourth of G major or g minor; the fifth of F major or f minor; the sixth of E-flat major or e minor; and the seventh of D-flat major or d-flat (c-sharp) minor.

The tones on all degrees of the major and minor modes are the same excepting the third and sixth. In the above illustration C is the third of A-flat major and a minor; and the sixth of E-flat major and e minor.

Regarding C as the seventh of a minor it must be changed enharmonically to b-sharp in c-sharp minor.

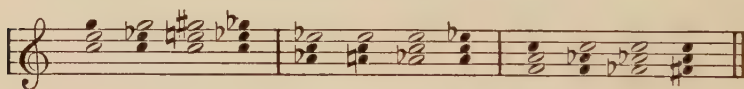
#### 29. A Tone May Belong to Four Thirds.

A tone may be regarded as the fundamental or third of a large or small third.



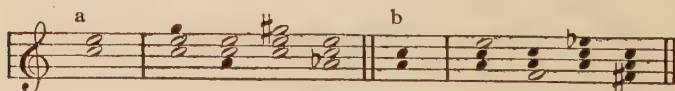
#### 30. A Tone May Belong to Twelve Triads.

A tone may be fundamental, third or fifth of a major, minor, augmented, or diminished triad.



#### 31. A Diatonic Third May Belong to Four Diatonic Triads.

A large third can be the lower third of a major triad; the upper third of a minor triad; the lower or upper third of an augmented triad (a). A small third can be the lower third of a minor triad; the upper third of a major triad; the upper or lower third of a diminished triad (b).



### 32. A Major Triad May Belong to Five Keys.

A major triad may be the first, fourth, or fifth of a major key, or the fifth or sixth of a minor key (a). Ex. sec. 35.

### 33. A Minor Triad May Belong to Five Keys.

A minor triad may be the second, third, or sixth of a major key, or the first or fourth of a minor key (b).

### 34. A Diminished Triad May Belong to Three Keys.

A diminished triad may be the seventh of the major key, or the second or seventh of a minor key (c).

### 35. An Augmented Triad Belongs to One Key.

The augmented triad is on the third degree of a minor (d).

C I	B $\flat$ II	D $\flat$ VII $^{\circ}$	A III'
G IV	A $\flat$ III	b $\flat$ II $^{\circ}$	
F V	E $\flat$ VI	(c $\sharp$ ) d $\flat$ VII $^{\circ}$	
f V	c I		
e VI	g IV		

By the use of enharmonic changes, any tone of an augmented may be regarded as a fundamental.

a III' f III'  $\sharp$ c III'

As far as the sound is concerned, there are but four augmented triads.

From the following illustration it will be noticed that the first, fifth, and ninth are alike, as far as the sound is concerned; the second, sixth, and tenth are alike; the third, seventh, and eleventh are alike; the fourth, eighth, and twelfth are alike.\*

I 2 3 4 5 6 7 8 9 10 11 12

\* Any one of these tones may be regarded in its enharmonic sense; i. e., D-sharp can be regarded as D-sharp or E-flat; F-sharp is F-sharp or G-flat; A-sharp is A-sharp or B-flat, etc.

QUESTIONS.

- 28 To how many scales can a tone belong? To what keys can A, B, E-flat, F-sharp, and A-flat belong? Which degrees of the major and minor scales differ
- 29 To how many diatonic thirds can a tone belong?
- 30 To what thirds can D, B-flat or B belong? To how many triads can a tone belong?
- 31 To how many triads can a third belong?
- 32 To how many keys can a major triad belong? To what keys could the major triads of D, E-flat, F and A belong?
- 33 To how many keys can a minor triad belong? To what keys could the minor triads of C, F-sharp, G and B-flat belong?
- 34 To how many keys can a diminished triad belong? To what keys could the diminished triads of B-sharp, D, E and G-sharp belong?
- 35 To how many keys can an augmented triad belong? To what keys can the augmented triads of C, E and A-flat belong? By enharmonic changes how many ways can an augmented triad be written, retaining the same sound and remain an augmented triad?

EXERCISE.

Form all the triads containing the thirds, C, E-flat; E, G-sharp; A-flat, C; A, C; G-flat, B-flat.

Form all the triads possible on the following tones, D, F-sharp, G, F-flat and B.

Give the enharmonic changes possible of the augmented triads of D, E and F, and under each triad indicate the key to which each triad belongs.

**NOTE:**—All exercises should be written with Roman numerals under the chords. Though they do not alter the chords, or affect the exercise, the use of the numerals will familiarize the student with the position of the chords in the different scales.

## Chapter V.

### PART WRITING.

#### 36. Part Writing.

Before commencing the usual four-part writing, the student should become thoroughly familiar with chord progressions, using three tones of a triad, bearing in mind that real voices are being dealt with, the soprano, alto, tenor and bass. Until four voices are considered, any three of these may be considered in connecting chords. The soprano and bass are considered the *outer* voices, the soprano being the highest and the bass being the lowest. The alto is the upper of the *inner* voices, while the tenor is the lower of the inner voices.

#### 37. Compass of Voices.

The placing of the four different voices as usually considered in part writing, may be established as follows:

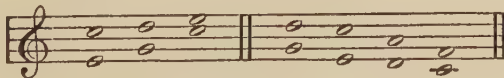
The whole notes represent the perfectly safe tones in ordinary four-part writing, and the quarter notes the possible tones.



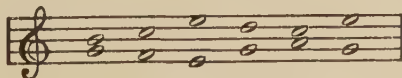
Soloists exceed these limits.

#### 38. Motion of Voices.

There are three motions of voices; first, *Parallel Motion*, i. e., voices moving in the same direction:

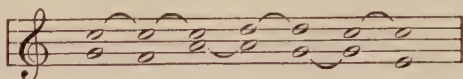


Second, *Contrary Motion*, i. e., when the voices move in opposite directions:

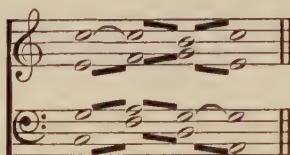




Third, *Oblique Motion*, i. e., when one voice remains stationary and the other voice moves up or down.



In four-part writing it will be necessary to combine two of these different kinds of motions.



### 39. Conjunct and Disjunct Movement of Voices.

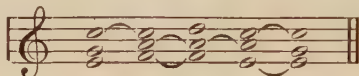
*Conjunct Movement* is the progression of voices by degrees.

*Disjunct Movement* is the progression of voices by skips.

## PRINCIPLES TO BE OBSERVED IN PART WRITING.

### 39 40. First Principle.

WHEN A COMMON TONE IS FOUND IN TWO CONNECTING CHORDS, IT SHOULD BE RETAINED IN THE SAME VOICE.



### 41. Second Principle.

VOICES THAT ARE NOT SINGING A COMMON TONE, SHOULD MOVE TO THE NEAREST TONES OF THE NEW CHORD.

The exercise under the first principle illustrates the moving of voices according to Principle Two.

### 42. Third Principle.

THE THIRD AND MOST IMPORTANT PRINCIPLE IN PART WRITING IS: A PROGRESSION IN PARALLEL MOTION OF PERFECT FIFTHS, OCTAVES AND UNISONS SHOULD BE AVOIDED.

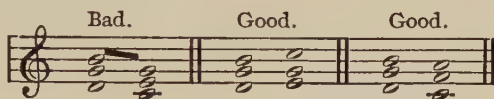


Consecutive octaves and unisons do not sound badly, but a progression of either reduces the harmony to three parts. Consecutive fifths are very unsatisfactory to the ear.

**NOTE:**—Experience has taught the author to regard the exercise of exceptions to this principle as confusing to the student. Until further developments, regard the above principles as absolute rules.

### 43. Fourth Principle.

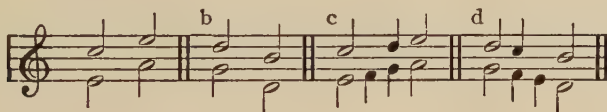
THE LEADING TONE SHOULD NOT SKIP DOWN IN AN OUTER VOICE; IT MAY MOVE DOWN ONE DEGREE, OR IT MAY SKIP DOWN IN AN INNER VOICE.



### 44. Covered Fifths.

When two voices move in parallel motion from any interval to a perfect fifth, and both voices skip, it is called a progression of *Covered Fifths*.

The same is true of two voices moving from a perfect fifth in parallel motion to any interval, both voices skipping.

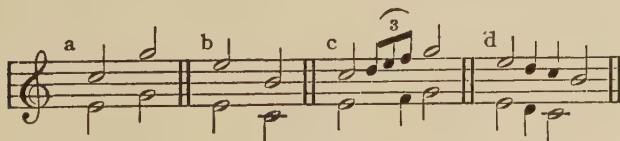


At "c" and "d", the small notes illustrate the covered fifths.

### 45. Covered Octaves.

When two voices move in parallel motion from any interval to a perfect octave, it is called a progression of *Covered Octaves*.

The same is true if two voices move in parallel motion from a perfect octave to any interval, both voices skipping.



At "c" and "d", the small notes illustrate the covered octaves.

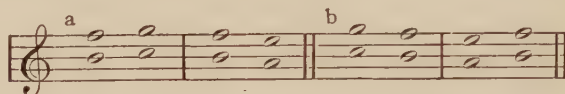
## 46. Fifth Principle.

COVERED OCTAVES AND FIFTHS SHOULD BE AVOIDED IF BOTH VOICES MOVE BY SKIPS.

## 47. Progression of Fifths.

The progression of a diminished fifth followed by a perfect fifth is as bad as a progression of perfect fifths. (Ex. a.)

The progression of a perfect fifth followed by a diminished fifth is permissible. (Ex. b.)



## 48. Three-Part Writing.

In the following example the tonic triad is connected with all other triads in the same key.

a Bad.      Good.      b

C I II    I II I II I II I II I II I III I IV

c

I V I VI I VII<sup>0</sup> I VII<sup>0</sup> I VII<sup>0</sup> I VII<sup>0</sup> I VII<sup>0</sup> I VII<sup>0</sup>

**EXPLANATION:**—In the first example "a" of the above exercise, when the tonic is so arranged to form a fifth, the following triad must not contain a fifth between the same voices, so it is necessary in this case to let the voices moving to the adjoining chord above, descend. In the other two positions in three-part writing, the other voices may move up or down. At "b" in the connection of the tonic with all the other triads, excepting the triads of the seventh degree (VII<sup>0</sup>), common tones are found which are retained in the same voice; this limits the progression of the other parts. At "c" in the connection of the tonic with the diminished (I-VII<sup>0</sup>) there is no common tone, but the progression of a perfect fifth followed by a diminished fifth is not prohibited.

## 49. Tri-Tone.

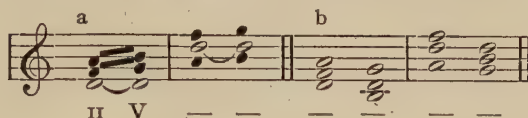
The step of an augmented fourth which occurs between the fourth and seventh degrees in a major scale, and between the fourth and seventh and sixth and second degrees of a minor scale, embrace three large seconds. It is called a *Tri-Tone*, (tri-three, tonus-tone). The step of a tri-tone is unsatisfactory and unmelodic, so should be avoided.

This interval has been referred to, by old theorists, as "the devil in music."

## 50. Connection of II-V.

In the connection of the super-tonic and dominant there is a common tone, but it is not generally retained in the same voice. This is on account of the very unpleasant relations of the two large thirds forming the tri-tone, or if inverted, the two small sixths covering the diminished fifth (a). These are unsatisfactory progressions, although they do not occur in the same voice, nor are they sounded simultaneously.

The following example will demonstrate the unsatisfactory progressions that occur between the two voices moving a whole step up or down in large thirds or small sixths.



In the connection of the super-tonic and dominant (II-V), it is considered best not to retain the common tone as at "b".

### QUESTIONS.

- 36 What voices are employed in four-part writing? Which are the outer voices, and which are the inner voices?
- 37 What is the usual compass of the four voices in part writing?
- 38 How many motions of voices are there, and what are they?
- 39 What is conjunct movement? What is disjunct movement?
- 40 What is the first principle to be observed in part writing?
- 41 What is the second principle to be observed?
- 42 What is the third principle to be observed?  
Which is the most important principle?
- 43 What is the fourth principle?
- 44 What is a covered fifth or octave progression?
- 46 What is the fifth principle to be observed?
- 47 What progression of fifths is allowed?
- 49 What is a tri-tone?
- 50 For what reason, in the connection of the chords on the second and fifth degrees of the major key, is the common tone not retained in the same voice?

### EXERCISE.

Connect every triad excepting the triads on the seventh degree in the major key with all other triads in the same key.

**NOTE:**—This exercise should be written in several keys away from the piano, giving careful attention to the principles laid down in the beginning of the chapter. The same exercise should be played at the piano without referring to the notes.

These exercises should be written and played with the chords arranged in different positions.



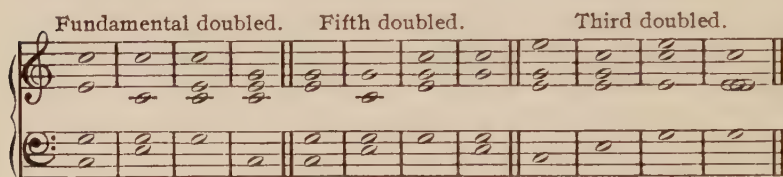
## Chapter VI.

### FOUR-PART WRITING.

#### 51. Doubling.

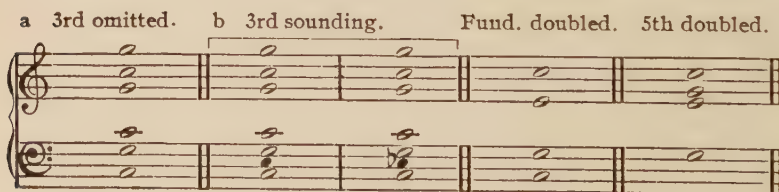
As there are but three tones in a triad, and four voices to consider, it is necessary that two voices use the same tone. When a tone is used by two voices it is said to be *doubled*.

The tones do not have to be in unison to be doubled; i. e., the bass and soprano by using the same tone, though two or three octaves apart, are doubled.



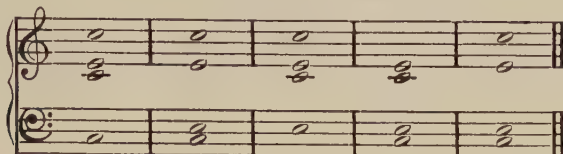
#### 52. Any Tone of a Triad May be Doubled.

Of the three tones in most major and minor triads, in four-part writing, it is best to double the fundamental, as it more definitely establishes the tonality of a chord. After the fundamental, the fifth is best suited for doubling, and lastly the third. The tone power of the third is more penetrating than that of either the fundamental or fifth. This may be demonstrated by taking a chord and sounding simultaneously two or more fundamentals and two or more fifths. By omitting the third the thinness of the chord is very noticeable (*a*), then by sounding the same combination again with the exception of one or two fifths or fundamentals of the original combination, the effect is not materially changed. By sounding the original combination with the addition of one third, the tonality, i. e., the major or minor character of the chord is established (*b*). This experiment will prove the tone power of the third, which demonstrates the fact that it is best to double either the fundamental or fifth.



### 53. Omitting the Fifth.

The fifth may be omitted and not disturb the tonality of a triad. The fundamental or third must not be omitted.



### 54. Sixth Principle.

The two considerations that must be given to the doubling of tones are the *tone power*, as far as the harmonic value is concerned, and also the *melodic tendency*. The *melodic* consideration is of more importance than the harmonic.

THE LEADING TONE MUST NOT BE DOUBLED IN FOUR-PART WRITING.

The *tone power* of the *leading tone* is more pronounced than any other tone in the scale. It is always the most sensitive and is very penetrating, owing to its decided inclination for definite progression to the tonic. Besides its melodic tendency, which alone would prohibit the possibility of doubling, the penetrating tone power, if doubled, would weaken the other tones.

### 55. Doubling of the Third and Sixth Degrees of the Scale.

Although the principle prohibiting the doubling of the leading tone is the only one that can be regarded as a rule, there are other tones in the scale which must receive careful consideration.

The tones least suited for doubling, after the leading tone, are the mediant and the sub-mediant. While these two tones have no decided melodic tendency, they establish the major or minor character of the key, consequently their tone power is more pronounced than the other degrees.

The sub-dominant, when sounded with the leading tone, has a melodic tendency to move contrary to the leading tone.

It is impossible to give rules regarding the doubling of tones, as the exceptions are so very numerous; however, special care must be given to this one point, as there is nothing in the study of harmony that requires more careful judgment, and only by continued application, together with the many suggestions that can be given, will the pupil develop a judgment and good taste that will indicate the best form to pursue.

## 56. Part Writing.

In the following example, the tonic triad is connected with all the other triads of the same scale, using four voices; the bass taking the fundamental of all triads.

Bad.      Good.

I II    I III    I IV    I V    I VI    I VII°    I VII°

When there is no common tone, the upper voice must move contrary to the bass, as in the connection of I-II. In the connection of I-VII°, careful attention must be given not to double the leading tone. In this last example, it will be necessary to double the third of the triad on the seventh degree.

## 57. Triads with Satisfactory Connections.

While it is possible to connect a triad with any triad in the same key, some triads are more satisfactory in their connection than others. Only individual tests can determine the progression best to use.

The following table will show the progressions most common.

I	is followed by	V, IV, VI, III,	seldom by	II.
II	"	" V, VI,	"	" I, III., IV.
III	"	" VI, IV,	"	" II, I, V.
IV	"	" I, V, II,	"	" III, VI.
V	"	" I, VI, III, II, IV,		
VI	"	" IV, III, II, V,	"	" I.

The connection of the VII° will be treated later.

The bass is given and the student is to write the upper voices. A figure over the bass note indicates a tone to be placed in the soprano; i. e., a 3, 5 or 8 indicates that the third, fifth, or octave of the bass is to be used in the soprano. This figure has reference to the first chord only. By the use of letters and Roman numerals, figure the bass before writing the upper voices.

For a guide to the student, the following exercises are worked:

Bass given.

8

The same example with the three other voices arranged.

II — V

C I V IV II V VI IV V I

The figure "8" indicates that the soprano has to sing the octave with the bass, so the soprano and bass double on the root or fundamental of the chord. In the connection of the chord C and G (I-V) the tone G is common. This tone is found in the alto of the tonic (I), so must be retained in the same voice according to Principle One.

The other voices move to the nearest tones of the new chord. In the connection of the chord G and F there is no common tone, so must move contrary to the bass. In the connection of the second and fifth, it is considered best not to hold the common tone. Where there are two common tones, as in the case of the sub-dominant and the super-tonic, and the sub-median and sub-dominant, they should both be retained in the same voice.

### QUESTIONS.

- 51 What is meant by doubling?
- 52 Which tones of a triad are best suited for doubling? Which voices may be doubled?
- 53 Which tone may be omitted?
- 54 What is the sixth principle to be observed?
- 55 Why are the third and sixth degrees not as well suited for doubling as other tones?
- 57 What triads best follow each other? What does a figure over the first note in a given bass indicate?

### EXERCISE.

Connect every triad in the major mode, with the exception of the seventh degree, with all other triads in the same key, by using four voices and using the fundamental of every chord in the bass.

The student should write the upper voices to the following given bass.

1. 8

2. 8

3. 3

4.



## Chapter VII.

### MINOR MODES.

#### 58. Comparison of Modes.

As stated before, there are two scales of the same signature; i. e., one major and one minor. These scales are said to be relative. The tonic of a minor scale is always a small third below the tonic of its relative major; e. g., C major and a minor have the same signature. The difference lies in the seventh degree of the minor. This tone is raised one chromatic half-step; e. g., in a minor G is sharpened, and in e minor D is sharpened.

The difference between a major and a minor scale with the same tonic, as C major and c minor, is in the signature, and there are two degrees that are not the same; i. e., the *thirds* and *sixths* of a *major* scale are *large*, while in the *minor* mode the *thirds* and *sixths* are *small*.

#### 59. The Augmented Second.

The augmented second, caused by the raising of the seventh, is the characteristic interval of the minor scale. This step, though often used to give effect in a melodic sense, and instrumental music, where it is given greater latitude, is very unsatisfactory in chord connection, and is especially so in inner voices. It is a very difficult interval to sing.

#### 60. Seventh Principle.

THE MELODIC PROGRESSION OF AN AUGMENTED SECOND SHOULD BE AVOIDED.

#### 61. Connection of the II° and V of Minor Modes.

In the connection of the triad in the second and fifth degrees, especial attention must be given. If the common tone be retained in the same voice, an augmented second will be encountered. Of the two principles, i. e., the one pertaining to common tones, and the one pertaining to augmented seconds, it is far better to avoid the augmented second and not hold the common tone.

Bad. Good.

a II V II° II° V II

**NOTE:**—A chromatic sign over a figured bass indicates the third of the bass note is to be altered; i. e., a sharp, flat, or a natural over a bass note will indicate that the third of that tone is to be made sharp, flat, or natural, as indicated by the chromatic sign. A chromatic sign preceded by a figure will indicate that the corresponding interval is to be altered according to the chromatic indication; i. e., a 5# over C would indicate that G is to be sharpened.

In the above examples it will be noticed that in the connection of the chords on the fifth and second (V-II) degrees of the minor, it will be necessary to move contrary to the bass and not retain the common tone.

## 62. Connection of V-VI.

In the connection of the dominant and sub-median (V-VI), certain progressions are necessary in order to avoid the augmented second, the progression of fifths and octaves.

When the sub-median (VI) follows the dominant (V), it will be necessary to let the leading tone ascend one degree. To descend would cause an augmented second. The other tones must move contrary to the bass in order to avoid the parallel progression of octaves and fifths. This progression will always double the third of the sub-median triad (VI).

Aug. 2nd. Oct. and 5ths. Good.

V VI V V VI V V VI V V VI V V VI V

When the dominant (V) follows the sub-median (VI), the reverse progression is made; i. e., in the sub-median (VI) let the third be doubled, but if the sub-median is introduced and the fundamental doubled, remove the fundamental in an upper voice, progress to the third of the sub-median (VI), then descend to the third of the dominant.

Aug. 2nd. Oct. and 5ths.

VI V VI V VI V VI V VI V VI V VI V

## 63. Discords of the Minor Scale.

There are three discords among the triads of the minor scale; the two diminished triads upon the second and seventh degrees, and the augmented triad upon the third degree (ii<sup>o</sup>, III', vii<sup>o</sup>).

## 64. The Augmented Triad.

The *Augmented Triad* upon the third degree is a very harsh dissonance, and as a fundamental chord in its root position, is very seldom used. Later on special attention will be given to this triad.

## 65. The Diminished Triad.

The *Diminished Triad* on the seventh degree of the minor mode (vii<sup>o</sup>) is rarely employed as a fundamental triad. In fact, all dissonant triads (those containing a diminished or an augmented fifth) are more effective in their inverted forms. In the diminished triads the third is generally doubled; however, there are times when it is very effective to double the fifth.

## 66. Exercises in the Connection of Major and Minor Triads with the other Triads of the Minor Scale.

For the present the student will be required to connect only the major and minor triads with the other triads. The different progressions for the dissonant triads will be given later on. In the resolution of the diminished triad only the regular resolution will be considered until further explanations are made, when special attention will be given to the other progressions for the diminished and augmented triads.

In the connection of the triads of the minor scale, the same principles must be observed as in the connection of the triads in the major scale, with the addition of the principle concerning the augmented second, which must be avoided.

## 67. Three-Part Writing.

In the following examples the tonic triad of c minor will connect with all other triads in the same scale.

The image shows a musical staff in treble clef with a key signature of one flat (B-flat). It contains a sequence of triads connected by horizontal lines. Below the staff, the triads are labeled with Roman numerals: c, I, II<sup>o</sup>, I, III', I, IV, I, V, I, VI, I, VII<sup>o</sup>. The triads are: c (C3, E3, G3), I (F3, A3, C4), II<sup>o</sup> (G3, Bb3, D4), I (F3, A3, C4), III' (A3, C4, Eb4), I (F3, A3, C4), IV (D3, F3, A3), I (F3, A3, C4), V (C3, E3, G3), I (F3, A3, C4), VI (D3, F3, Ab3), I (F3, A3, C4), VII<sup>o</sup> (G3, Bb3, D4).

EXERCISE:—Connect the I, IV, V and VI triads of a minor mode with all other triads in the same key.

NOTE:—These exercises should be written and played in the same way as advised in the preceding chapter in the connection of the triads in the major scale.

## 68. Four-Part Writing.

In the following example the tonic triad of c minor is connected with all other triads of the same scale, using four voices, the bass taking the fundamental of all triads.

C I II° I III' I IV I V I VI I VII°

## 69. Triads with Satisfactory Connections.

Though it is possible to connect any triad of a minor mode with any triad in the same mode, the following progressions are most common in their connection:

I	is followed by	V, VI, IV, II°,	sometimes by	III'.
IV	"	"	V, I, II°,	
V	"	"	I, VI, III',	" IV.
VI	"	"	IV,	" V, II°.

The connection of the triads following the II°, III' and VII° will be treated later on.

In the following exercise the student must pay careful attention and observe where the connection of the II°, V, and V, VI or VI, V occur.

### EXERCISE:—

1. Connect the triads on the I, IV, V, VI degrees of the minor with all other triads in the same key. Use four voices, and the fundamental of every chord in the bass.

2. Write the upper voices to the following exercise:

1.

2.

3.



## QUESTIONS.

- 58 *How many scales are there with one signature? What is the difference between a major scale and its relative minor? What is the difference between a major scale and a minor scale having the same tonic?*
- 59 *Where does the augmented second occur in the minor modes? Does it occur on any other diatonic degree?*
- 60 *What is the seventh principle to be observed in part writing?*
- 61 *In the connection of the triads on the second and fifth degrees of the minor, what progression of voices will be necessary? What does a chromatic sign over a bass note mean? What is meant by a chromatic sign and a figure over a bass note?*
- 62 *What is necessary in the connection of the dominant and subdominant chords in the minor mode? What is necessary when the dominant follows the sub-mediante?*
- 63 *How many discords are there among the triads of the minor scale, and what are they?*
- 64 *Where does an augmented triad occur? Does the augmented triad often occur as a fundamental triad?*
- 65 *Is the diminished triad often employed as a fundamental triad?*
- 69 *What triads of the minor scale have satisfactory connections?*

## Chapter VIII.

## INVERSIONS.

## 70. Inverted Triads.

Any tone of the chord may be placed in the lower voice without affecting the harmonic character of the chord. When the fundamental is in the bass, the chord is a fundamental chord. When the third or fifth is in the bass, the chord is said to be *inverted*. In a preceding chapter we have referred to six positions of a triad; as a tone of a chord may be placed in the bass and either of the upper tones may be placed in the soprano; however, in the so-called "*Figured bass*," there are three positions considered. The fundamental position, with the fundamental or root of the chord in the bass; the *first* and *second inversion*, with the third and fifth in the bass.

**NOTE:**—Although the referred to "*figured bass*" is a very old way of defining chords, the author has found it to be the most excellent way of saving words, and the chords when spoken of by their figures are always clearly understood.

## 71. Fundamental Chords.

In the figured bass, when a fundamental chord is considered, there is no figure over the bass note.

An exception is made for this statement when the first note of a bass exercise is figured, and the figure over this note indicates the tone to be used by the soprano.

## 72. First Inversion. Six-Chord.

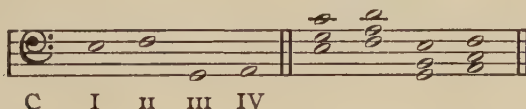
When the third of the triad is in the bass, the order of intervals, which in a fundamental position are a first, third and fifth, become altered so that the third of the original becomes the first in the new order of intervals; the fifth of the original becomes the third, and the fundamental or root is a sixth above the bass note. This chord with the third in the bass is the first inversion, and is called the *Six-chord*, or *Chord of the sixth*.

Fundamental. First Inversion.



In a figured bass a six-chord is indicated by the figure "6" over the bass note.

Figured bass 6 6 6 6 Indicates:



In the numbering of the bass chords, the fundamental must be considered, *not* the *bass note*; as in the above example the "6" over E, F, G and A indicates the triads of C, D, E and F.

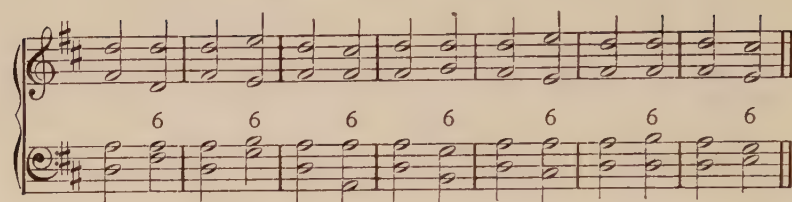
## 73. Doubling in Six-Chords.

The fundamental of the major and minor chords in the first inversion is generally best suited for doubling. As stated before, in discords it is generally best to double the third.

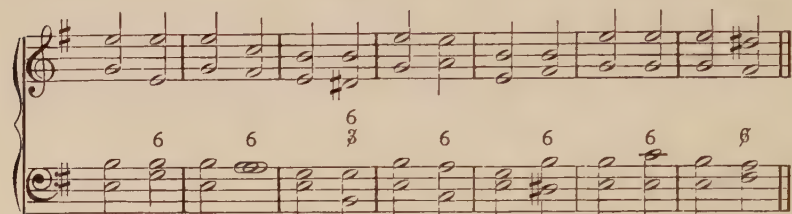
The fundamental of any chord may be doubled, excepting when the fundamental is the leading tone.

## 74. Connecting Fundamental Triads and Six-Chords.

When the fundamental of a chord is the first, second, fourth or fifth degree of a scale, it is generally doubled. When the fundamental is the third or sixth, it is less frequently doubled. As stated before, these two tones determine the major or minor character of the key. In the following example is given the connection of the tonic with other triads of the same key in the first inversion.



D Major. I —I I II I III I IV I V I VI I VII<sup>0</sup>



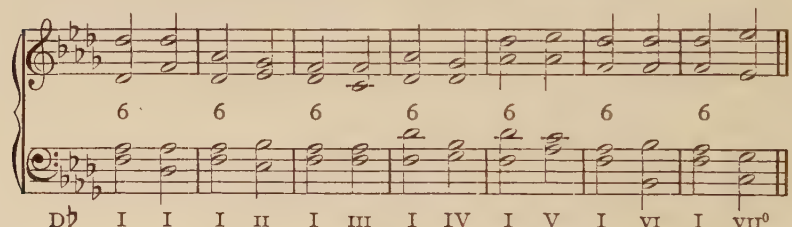
e minor. I I I II<sup>0</sup> I III' I IV I V I VI I VII<sup>0</sup>

NOTE:—A figure with a line through it means that the corresponding interval is to be chromatically raised.

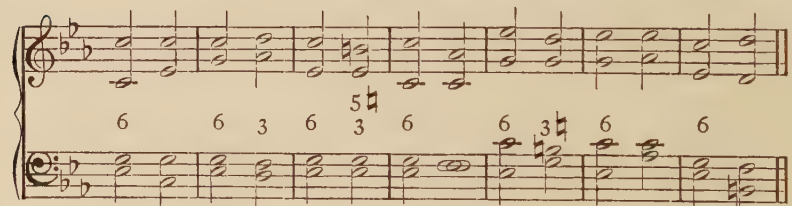
EXERCISE:—The student should connect every major and minor triad in the fundamental position with every other triad in the first inversion in the same key.

The exercises in this chapter should be worked in major and minor keys.

In the following example, the tonic in its first inversion is connected with every fundamental triad in the same key.



D<sup>b</sup> I I I II I III I IV I V I VI I VII<sup>0</sup>

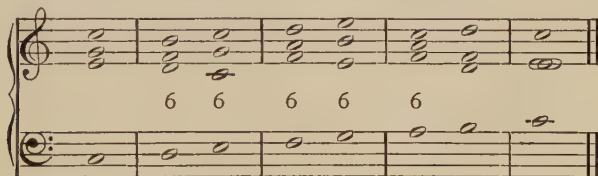


C I I I II I III' I VI I V I VI I VII<sup>0</sup>

EXERCISE:—Connect every major and minor triad in its first inversion with every other triad in its fundamental position in the same key.

## 75. Six-Chords in Succession.

Two or more successive six-chords are frequently used. A parallel motion of parts in four-part writing, as a rule, is impossible in such triads on account of the consecutive octaves and fifths. When two or more six-chords are used in succession, a very careful consideration must be given to the doubling. In most cases it will be necessary to double the fundamental of each alternating chord; in the other chords the third is doubled. No rule can be given; only the leading of the voice will determine whether it is better to double the third or fundamental of the first chord.



In the following example, the tonic in its first inversion is connected with every other six-chord in the same scale.

B $\flat$  I II I II I III I IV I V I VI I VII<sup>0</sup>

b I II<sup>0</sup> I II I III' I IV I V I VI I VII<sup>0</sup>

There are cases where the bass in both chords of successive six-chords may be doubled, when the soprano and bass move in contrary motion, although this is not a safe progression—and not necessary. The bass may be doubled in successive six-chords when the soprano and bass move in contrary motion.\*\*

B $\flat$  Major.                      b minor.



## 76. General Summary.

1. Any bass of a six-chord may be doubled upon any degree excepting the seventh.

2. When there are successions of six-chords, the bass will double in every alternate chord, unless the soprano and bass move in contrary motion. In such cases the bass in both chords may be doubled.

3. In six-chords the bass is frequently doubled in order to obtain a better melodic progression for the voice, which is always to be preferred to the harmonic character of the chord.

EXERCISE:—Connect every major and minor triad in the scale in its first inversion with every other triad in its first inversion.

## 77. Second Inversion.

When the fifth is in the bass, the order of intervals is so altered so that the fifth of the original chord becomes the first in the order of intervals of the new formation; the fundamental becomes the fourth above the bass note, and the third becomes the sixth. This is called the *four-six* chord, or the *second inversion*.



In a figured bass, a four-six chord is indicated by a  $\frac{6}{4}$  over the bass note.

	6	6	6	6	
Figured bass.	4	4	4	4	Indicates:

C    IV   V   VI   VII<sup>o</sup>

## 78. How Four-Six Chords are Used.

The four-six chords can be used in a very few ways, and most of these can be definitely stated in this chapter.

The four-six chords can follow or be followed by a fundamental chord, or an inversion (generally a sixth chord).

The bass of the four-six chord is generally doubled.

Four-six chords are seldom in succession.

Four-six chords are frequently used on the accented part of a measure in the approaching close of a composition, or the close of a part of a composition.

D $\flat$  I V I d I V I

A four-six chord is frequently employed after a triad, and before a six-chord of the same harmony.

E I — — V I

A four-six chord is frequently used when preceded or followed by a triad having the same bass, although this is not a strong progression.

D I IV I

Four-six chords are satisfactory when the bass moves in conjunct movement (by degrees).

D I IV I

Four-six chords in succession are weak when the bass skips; however, there are examples where this progression is satisfactory.

Franz. Op. 13, No. 1.      Grieg. ° Op. 23.

## QUESTIONS.

- 70 What is understood by an inverted triad?  
 72 What is the first inversion? What is it called? Why? How is it indicated in figured bass?  
 73 What tone is generally best to double in fundamental chords? In six-chords?  
 75 When six-chords are in succession, what doubling will be necessary? When may the bass of successive six-chords be doubled?  
 77 What is meant by the second inversion? What is it called? Why? How is it indicated in figured bass?  
 78 Which tone is generally doubled in four-six chords? By what chords can a four-six chord be preceded or followed? State some of the ways that the four-six chords may be used. Are four-six chords in succession satisfactory?

## Chapter IX.

## CADENCES.

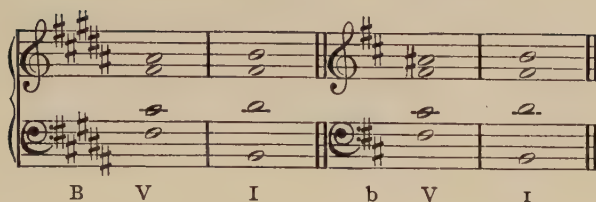
## 79. Cadences.

A Cadence is a Close.

A composition should *always* close with a tonic triad. The approaching close, or feeling of rest, is suggested by the dominant or sub-dominant. Either of these triads followed by the tonic are called *Cadences*.

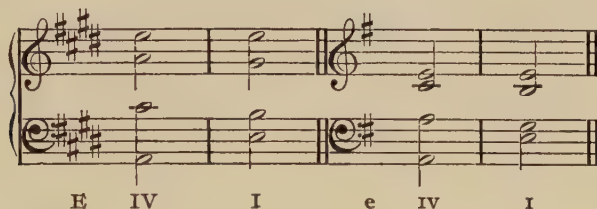
## 80. Authentic Cadences.

The dominant triad, followed by the tonic (V, I), especially creates the impression of a complete close if the tonic falls upon the accented part of the measure. This progression is called the *Authentic Cadence* (authentic signifying real).



### 81. Plagal Cadences.

The sub-dominant triad followed by the tonic (IV, I) suggests a close, though it is not as distinct as the authentic cadence (V, I). This progression is called the *Plagal Cadence* (*plagius-collateral*) or secondary.



### 82. Perfect and Imperfect Cadences.

Authentic and Plagal cadences are called *perfect* when the dominant or sub-dominant triads fall upon the unaccented part of the measure and the tonic upon the accented part of the measure. The fundamental of the chords should be in the bass, and the fundamental of the tonic should be in the soprano. Any other arrangement of these cadences is called *imperfect*.

EXERCISE:—Write the authentic and plagal cadences in four voices, open position, in all major and minor keys.

### 83. Half Cadences.

Half cadences may be considered in most cases as a reversal of the authentic cadences.





Half cadences very closely resemble the Plagal cadences; as in the previous example the tonic of G, followed by its dominant D, has the character of the Plagal cadence (IV, I) of D. This cadence is often preceded by the tonic in its four-six position. It may, however, be introduced in other ways.



#### 84. Extended Authentic Cadences.

*Authentic* cadences may be strengthened by being preceded by the super-tonic or the sub-dominant triad. The progression of the II, V, I; IV, V, I of the major, or the II<sup>o</sup>, V, I or IV, V, I of the minor, are called *Extended Authentic Cadences*.



EXERCISE:—Write the Extended Authentic cadences in all the major and minor keys, in four parts, open position.

#### 85. Double Extended Cadences.

If the second inversion (the four-six chord) of the tonic is introduced in the *Extended authentic cadences*, the feeling of approaching close is more emphatically pronounced. Such cadences are called *Double Extended Cadences*, or *four-six cadences*.

The musical score for "The Rose Tree" is presented in two systems. Each system consists of a vocal line (treble clef) and a piano accompaniment line (bass clef). The key signature is one flat (B-flat), and the time signature is 4/4. The first system includes a 6-measure rest in the piano part. The second system continues the melody and accompaniment. Below the piano part of the first system, the following chords are indicated: B $\flat$ , I, II, I, V, I, I, IV, I, V, I. Below the piano part of the second system, the following chords are indicated: a, I, II $^{\circ}$ , I, V, I, I, IV, I, V, I.

EXERCISE:—Write doubled extended four-six cadences in all major and minor keys.


## 86. Deceptive Cadences.

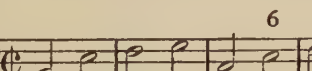
When the dominant triad is followed by an unexpected triad, i. e., any chord excepting the tonic, and suggesting a close, it is called a *Deceptive Cadence*. Such progressions are frequent when there is a change of key.

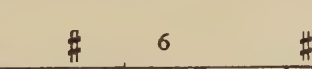
### QUESTIONS.

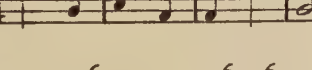
79 What is a Cadence? 80 What is an Authentic Cadence? 81 What is a Plagal? 82 What is a Perfect Cadence? Imperfect? 83 What is a Half Cadence? 84 What is an Extended Authentic Cadence? 85 What is a Double Extended Cadence? 86 What is a Deceptive Cadence?

**EXERCISE:—**Write the upper voices to the following basses.

1. 

2. 

3. 

4. 

## Chapter X.

### THE DIMINISHED TRIADS.

#### 87. Diminished Triads are Discords.

All diminished triads are discords, owing to the diminished fifth, and for this reason require a resolution.

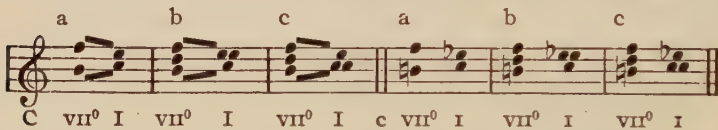
#### 88. The Ordinary Resolution of the Diminished Triad.

The diminished triad upon the seventh degree of the major or minor scale requires a very careful consideration, owing to its dissonant fifth, and also the position of its fundamental, which is the leading tone. There is more latitude given the diminished triad upon the second degree of the minor.

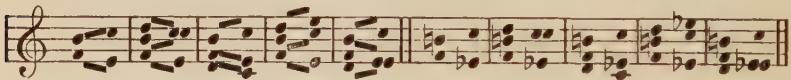
(First.) The fundamental of the diminished triad ascends one diatonic degree.

(Second.) The fifth descends one diatonic degree (a). For this reason the fifth of the diminished upon the seventh degree, which is the sub-dominant, is sometimes called the sub-leading tone, as its tendency to progress to the third of the tonic is as decided as the ascending tendency of the leading tone.

(Third.) The third may ascend (b) or descend (c) one degree.

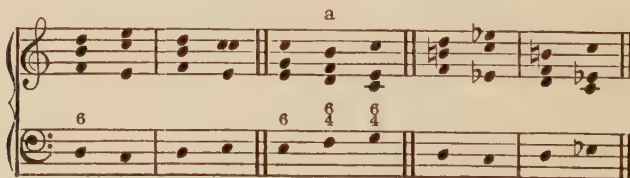


By inverting the diminished triad, the diminished fifth becomes an augmented fourth. This does not change the resolution.



#### 89. Four-Part Connection of the Diminished Triad.

In four-part writing, the third of the diminished is generally doubled, although the fifth may be doubled (a).



EXERCISE:—Connect the diminished triad in different positions upon the seventh degree ( $\text{VII}^0$ ) in major and minor modes with the tonic, using four parts.

## 90. Other Connections for the Diminished Triad.

The diminished triad may connect with all other triads of the major and minor scale. Careful attention must be given to the rules pertaining to doubling of the leading tone. The diminished fifth can not be followed by perfect fifths, and the leading tone should not skip down in an outer voice.

Three musical staves illustrating triad connections in A major and f# minor. The first staff shows A major triads: A  $\text{VII}^0$ , I, II, III, IV, V, VI. The second staff shows f# minor triads: a  $\text{VII}^0$ , I,  $\text{II}^0$ , III', IV, V, VI. The third staff shows f# minor triads: f#  $\text{II}^0$ , I, III, IV, V, VI,  $\text{VII}^0$ . Diminished triads are marked with a circle and a cross.

EXERCISE:—Connect the diminished triad, the  $\text{VII}^0$  of the major and the  $\text{II}^0$  and  $\text{VII}^0$  of the minor with all other triads in the same key.

NOTE:—The student should write the exercise in different positions from those given in the above examples.

The diminished triad on the  $\text{II}^0$  degree of the minor is not as restricted as that of the  $\text{VII}^0$  degree, as the fundamental of the latter is the leading tone, and has a decided melodic tendency and pronounced tone power.

## 91. The Diminished Triad in Four-Part Writing.

Ordinarily the third of the diminished triad should be doubled in four-part writing.

Many of the following progressions are never used, but the connections are possible.

Musical staff showing a sequence of triads in A major: D,  $\text{VII}^0$ , I, II, III, IV, V, VI. The diminished triad  $\text{VII}^0$  is circled with a cross. The staff is divided into measures by vertical lines.



d VII<sup>0</sup> I — II<sup>0</sup> — III' — IV — V — VI

b II<sup>0</sup> I — III' — IV — V — VI — VII<sup>0</sup>

The diminished triad on the seventh degree of the minor mode (VII<sup>0</sup>) is rarely employed as a fundamental triad. In fact, all dissonant triads (those containing a diminished or an augmented fifth) are more effective in their inverted forms. In the diminished triads the third is generally doubled; however, there are times when it is very effective to double the fifth.

There are cases where the fifth may be doubled in the triad upon the VII<sup>0</sup> degree.

C I VII<sup>0</sup> I VII<sup>0</sup> I VII<sup>0</sup> I

There are cases where the fundamental of the II<sup>0</sup> degree of the minor can be doubled.

a I II<sup>0</sup> I II<sup>0</sup> I II<sup>0</sup> I

## 92. Summary.

The diminished triad can connect with any triad in the same mode.

In the connection of these triads careful attention must be given to the doubling of the leading tone, the progression of the fifths, octaves and unisons; and, in the minor mode, to avoid the augmented seconds between the sixth and seventh degrees.

The fundamental of the diminished on the  $\text{VII}^0$  degree cannot be doubled, and the fifth of the diminished on the  $\text{II}^0$  degree cannot be doubled, as the ascending voice would encounter an augmented second.

### EXERCISE:—

1. Connect (in three-part writing) the diminished triad on the seventh degree of G and A-flat major and g and d minor, and the second of e and f minor with all other triads in the scale.

2. Connect (in four-part writing) the diminished triad on the  $\text{VII}^0$  of major and minor modes and the  $\text{II}^0$  of the minor with all other triads in the same key.

3. Make a progression of the diminished upon the  $\text{VII}^0$  degree of the major and minor, showing the possibility of doubling the fifth.

4. Make a progression of the  $\text{II}^0$  of the minor, showing the possibility of doubling the fundamental.

### QUESTIONS.

- 87 *What is the character of a diminished triad? Why?*  
 88 *What is the ordinary resolution?*  
 89 *Which tone is best to double?*  
 90 *To what triad may the diminished triad progress?*  
 91 *Are there tones of the diminished, other than the third, which may be doubled?*

1.

2.

## Chapter XI.

### SEPT-CHORDS.

#### 93. Sept-Chord Formations.

By adding a third to any triad a four tone combination of three thirds will be formed. Such chords are called "Sept-Chords."\*

The limitation of a sept-chord will be a seventh. As there are three kinds of sevenths there are three kinds of sept-chords.

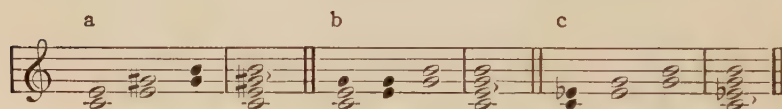
Chords containing large sevenths are called *Large Sept-Chords*.

Chords containing small sevenths are called *Small Sept-Chords*.

Chords containing a diminished seventh are called *Diminished Sept-Chords*.

#### 94. Large Sept-Chords.

A large seventh may be divided into two large and one small third. The small third can be the upper third, as at "a," the inner third, as at "b," or the fundamental third, as at "c."



**EXPLANATION:**—The open notes in the examples represent large thirds, the closed notes represent small thirds.

The first, third, and fifth of the chord in Example *a* correspond to an augmented triad. This chord is called the *Large Augmented Sept-Chord*.

The first, third, and fifth of the Chord in Example *b* correspond to a major triad. This chord is called a *Large Major Sept-Chord*.

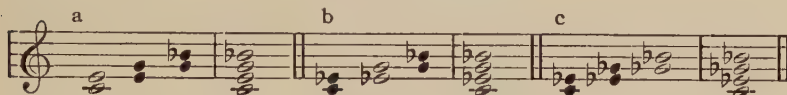
The first, third, and fifth of the chord in Example *c* correspond to a minor triad. This chord is called a *Large Minor Sept-Chord*.

**\*NOTE:**—The term "Sept-Chord" is deemed advisable as it is less confusing than the term "chord of the seventh," as students confuse the term "chord of the seventh" and "chord on the seventh."

## 95. Small Sept-Chords.

Sept-chords containing a small seventh are called *Small Sept-Chords*.

As a small seventh is composed of two small thirds and one large third; this combination of thirds can be arranged in three ways, as in the case of the large sept-chords; i. e., the large third can be the fundamental, the inner or the upper third.



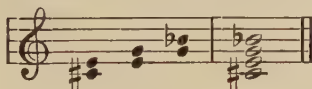
The fundamental, third and fifth of the first chord, in the above illustration, corresponds to a major triad. This sept-chord is called the *Small Major Sept-Chord* (a).

In the second chord, the fundamental, third and fifth correspond to a minor triad. This is called the *Small Minor Sept-Chord* (b).

In the third sept-chord, the fundamental, third and fifth correspond to a diminished triad. This is called the *Small Diminished Sept-Chord* (c).

## 96. Diminished Sept-Chords.

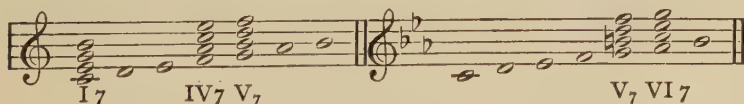
A sept-chord containing a diminished seventh is called a *Diminished Sept-Chord*. The fundamental, third and fifth correspond to a diminished triad, and the seventh is a diminished seventh.



## 97. The Location of Diatonic Sept-Chords.

A large major sept-chord can be found only where major triads and large sevenths occur.

The major triads occur on the I, IV and V of the major mode, and the V, VI of the minor mode. The I7, IV7, of the major and the VI7 of the minor mode have large sevenths. The V7 in the major and minor modes have small sevenths.



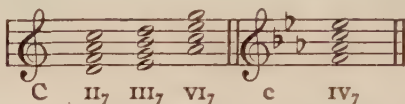
There are three large major sept-chords and two small major sept-chords.



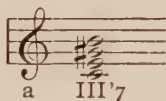
The large minor sept-chord occurs on the first degree of the minor mode only, as on all other degrees of the major and minor mode, where there are minor triads, small sevenths occur.



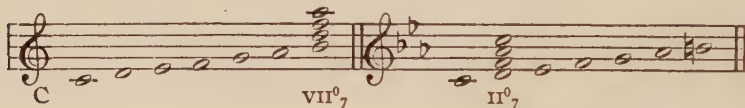
The small minor sept-chords occur on the  $\text{II}_7$ ,  $\text{III}_7$ , and  $\text{VI}_7$  of the major mode, and on the  $\text{IV}_7$  of the minor mode.



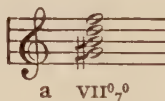
The large augmented sept-chord can occur on the  $\text{III}'_7$  of the minor only.



The small diminished sept-chord occurs on the  $\text{VII}^0_7$  of the major, and the  $\text{II}^0_7$  of the minor mode.



The diminished sept-chord occurs, as a diatonic sept-chord, on the  $\text{VII}^0_7$  of the minor only.



## 98. Sept-Chords are Discords.

As all sevenths are dissonant intervals, all sept-chords are discords, so all sept-chords will require a resolution.

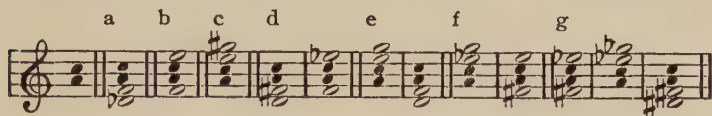
## 99. Plural Significance of Tones Compared to Sept-Chords.

*Any tone may belong to twenty-eight sept-chords.*

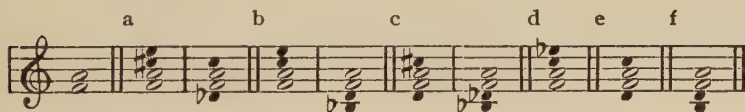
As a tone may be a fundamental, third, fifth or seventh of any one of the seven diatonic sept-chords, it may belong to twenty-eight diatonic sept-chords.

*A small third can belong to twelve sept-chords.*

A small third can be the upper third of a large augmented sept-chord (a); the inner third of a large major sept-chord (b); the fundamental third of a large minor sept-chord (c); or it may be the upper or inner third of a small major sept-chord (d); it may be the fundamental or upper third of a small minor sept-chord (e); the fundamental or inner third of a small diminished sept-chord (f); or the fundamental, inner, or upper third of a diminished sept-chord (g).

*A large third can belong to nine sept-chords.*

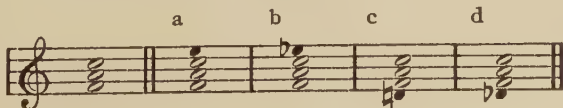
A large third may be the fundamental or inner third of a large augmented sept-chord (a); the fundamental or upper third of a large major sept-chord (b); the inner or upper third of a large minor sept-chord (c); the fundamental third of a small major sept-chord (d); the inner third of a small minor sept-chord (e); or the upper third of a small diminished sept-chord (f).



Two large thirds (the formation of an augmented triad) may belong to two sept-chords. They may form the first, third and fifth of the large augmented sept-chord (a); or the third, fifth and seventh of the large minor sept-chord (b).



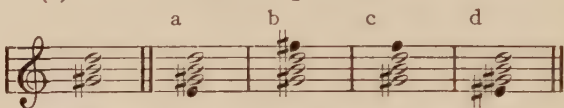
A large third and a perfect fifth (the formation of a major triad) may be the first, third and fifth of a large major sept-chord (a); or the first, third and fifth of a small major sept-chord (b); the third, fifth and seventh of a small minor sept-chord (c); or the third, fifth and seventh of a large augmented sept-chord (d).



A small third and a perfect fifth (the formation of a minor triad) may be the third, fifth and seventh of a large major sept-chord (a); or the fundamental, third and fifth of a large minor sept-chord (b); the fundamental, third and fifth of a small minor sept-chord (c); the third, fifth and seventh of a small diminished sept-chord (d).



A small third and diminished fifth (the formation of a diminished triad) may be the third, fifth and seventh of a small major sept-chord (a); the fundamental, third and fifth of a small diminished sept-chord (b); the fundamental, third and fifth (c); or the third, fifth and seventh (d) of a diminished sept-chord.



A large major sept-chord may be the I<sub>7</sub>, IV<sub>7</sub> of a major key, or the VI<sub>7</sub> of a minor key.

The large minor sept-chord may be the I<sub>7</sub> of a minor scale.

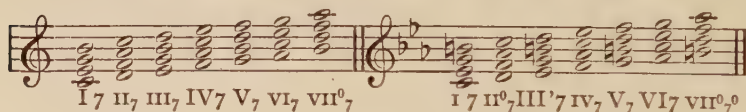
The large augmented sept-chord is the III<sub>7</sub> of a minor.

The small major sept-chord may be the V<sub>7</sub> of the major or minor.

The small minor sept-chord may be the II<sub>7</sub>, III<sub>7</sub> and VI<sub>7</sub> of the major mode, or the IV<sub>7</sub> of the minor mode.

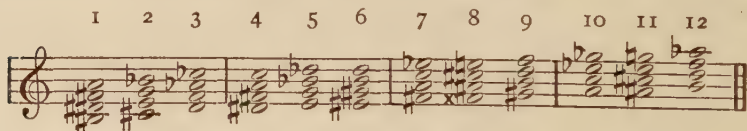
The small diminished sept-chord may be the VII<sub>7</sub><sup>0</sup> of the major mode, or the II<sub>7</sub><sup>0</sup> of the minor mode.

The diminished sept-chord occurs on the VII<sub>7</sub><sup>0</sup> of the minor.



As far as sound is concerned, there are but three diminished sept-chords; as in the case of the augmented triad, there are but four augmented triads.

From the following exercise it will be noticed that the first, fourth, seventh and tenth, are alike as far as sound is concerned; the second, fifth, eighth and eleventh are alike, and the third, sixth, ninth and twelfth are alike.



## QUESTIONS.

- 93 *What is a Sept-Chord? What is the largest seventh that can be in a sept-chord? Why?*
- 94 *What are sept-chords with large sevenths called? How many sept-chords have large sevenths? What are they called? What is the formation of each?*
- 95 *What are sept-chords with small sevenths called? How many sept-chords have small sevenths? What are they called? What is the formation of each?*
- 96 *What is a sept-chord with a diminished seventh called?*
- 97 *Where does a large major sept-chord occur? A large minor sept-chord? A large augmented sept-chord? Where does a small major sept-chord occur? A small minor sept-chord? A small diminished sept-chord? Where does a diminished sept-chord occur?*
- 98 *Why are sept-chords discords? What is required of a discord?*
- 99 *To how many sept-chords can a tone belong? To how many sept-chords can a large third belong? To how many sept-chords can a small third belong? To how many sept-chords can the formation of an augmented triad belong? To what sept-chords can the formation of a major triad belong? To what sept-chords can the formation of a minor triad belong? To what sept-chords can the formation of a diminished triad belong?*

## EXERCISE.

- 1 *Form sept-chords in all the degrees of the scales of E major, A-flat, e minor, and g-sharp minor.*
- 2 *Form all the sept-chords possible containing the intervals, E, G-sharp and B-flat, B.*
- 3 *Form the sept-chords possible containing the following intervals, F-sharp, A and F, A-flat.*
- 4 *By using the diminished sept-chord, C-sharp, E; G, B-flat as a basis, write sept-chords using each tone as a fundamental, and not change the tonality of the chord.*

## Chapter XII.

## SEPT-CHORDS IN PART WRITING.

## 100. Satisfactory Sept-Chords.

Large Sept-chords are most dissonant, owing to the closeness of the seventh and the octave of the fundamental, which is only a half-step.

Small Major Sept-chords have the character of a major triad with a Small Third added above.

Small Diminished Sept-chords have the character of minor triads, with the small third added below.

In the case of a Small Minor Sept-chord where two Small Thirds are divided by a Large Third, it has the sound of a major triad, and its relative minor as the third, fifth and seventh form a major triad, and the first, third and fifth form a minor triad.

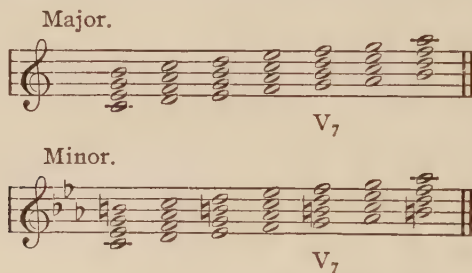
*Sept-chords containing two adjoining small thirds (a) are more satisfactory than those with two large thirds, or two small thirds with a large third between (b).*



## 101. The Dominant Sept-Chord.

The sept-chord on the fifth degree of the major and minor modes is more frequently used than any other sept-chord.

The dominant sept-chord is the small major sept-chord, which is composed of one large third and two small thirds; or a root, large third, perfect fifth and small seventh. The  $V_7$  sept-chord has the same formation in the major and the minor mode; it is the only sept-chord that is the same in the two modes found on the same degree.



As all other sept-chords built on large thirds have large sevenths, the dominant sept-chord may be always recognized by its large third and small seventh.

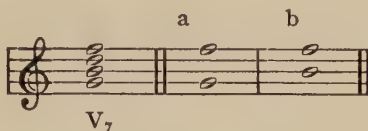
This is the first chord we have considered that establishes a key. It does not establish the mode.

## 102. Ordinary Resolutions.

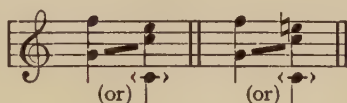
The first resolution of the dominant seventh to be considered, will be the one most frequently employed.



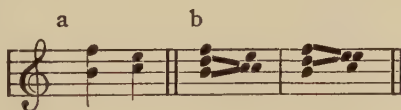
There are two dissonant intervals in the  $V_7$ ; they are the small seventh, formed by the root and seventh (a); and the diminished fifth, formed by the third and seventh (b).



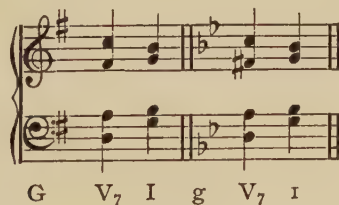
The seventh in the  $V_7$  descends one diatonic degree to the third of the scale, and the root, if in the lower voice, ascends a fourth or descends a fifth.



The third, which is the leading tone, ascends to the tonic (a); the fifth, being a consonant interval, may ascend or descend one degree (b), as in the case of the third of the diminished triad on the VII degree.

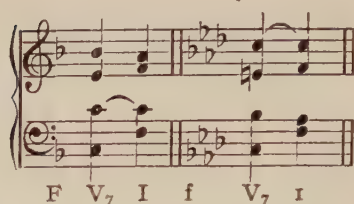


This gives, in the ordinary resolution, the root and the third of the tonic triad but no fifth.



### 103. The Root May be Doubled.

The root of the  $V_7$  may be doubled, and is the only tone that can be doubled; in such cases the fifth is best omitted, and sometimes the third. One of the double tones will remain in the same voice in the ordinary part progression. This will give you a complete tonic triad.



The third (the leading tone) and the seventh are the two most sensitive tones, so must not be doubled. There are cases where the third, the leading tone, may skip down to the fifth of the tonic.



In the above example attention must be given to the bass tone and the leading tone; they should move in contrary motion.

EXERCISE:—

3 6 7 6 6 4 7 6 6 6 7 6 6 4 7 3 6 7 5 6 7 4 7 3 6 6 7 x 6 6 6 7 x

### QUESTIONS.

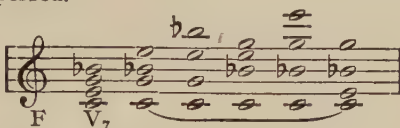
- 100 Are sept-chords discords? Which are the most harsh?
- 101 What sept-chord is the most frequently employed? What intervals are in the V<sub>7</sub> of the major? Minor? Does the V<sub>7</sub> establish a key? A mode?
- 102 Give the ordinary resolution of the V<sub>7</sub>.
- 103 Which tone of the V<sub>7</sub> can be doubled? Omitted?

## Chapter XIII.

### INVERSION OF THE SEPT-CHORD.

#### 104. Fundamental Sept-Chords.

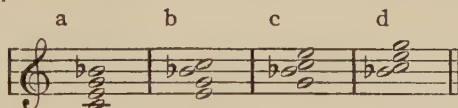
When the fundamental of a sept-chord is in the lower voice, it is called a *Fundamental Sept-Chord*; however, there are six ways of arranging a fundamental sept-chord. All, excepting the first, are fundamental dispersed.



All fundamental sept-chords are indicated in the figured bass by a "7" over the bass note.

#### 105. Inverted Sept-Chords.

When the third, fifth or seventh is in the lowest voice, the sept-chord is inverted. An inverted sept-chord derives its name in the figured bass, according to the position of the root and seventh, to the bass tone.

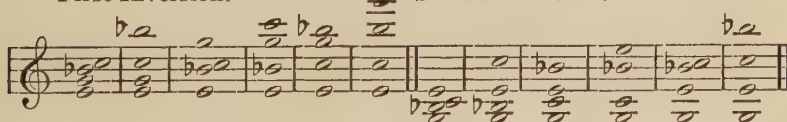


At "a" the chord is a fundamental chord. At "b" the seventh is a fifth above the bass tone, and the root is a sixth above the bass tone. This is called the *first inversion*, or the 5-6 chord. At "c" the seventh is a third above the bass note, which is the fifth of the original chord, and the root is a fourth above the bass note. This is the *second inversion*, and is called the 3-4 chord. At "d" the seventh is in the bass, and the root is a second above it. This is called the *third inversion*, or the 2-chord. It is sometimes called the 2-4 chord. A "7" over a bass note indicates a fundamental sept-chord. A 5-6 indicates a first inversion; i. e., the third in the bass. A 3-4 indicates a second inversion; i. e., the fifth in the bass. A 2 or 2-4 indicates a third inversion; i. e., a seventh in the bass.

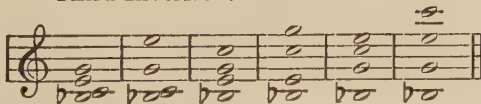
There are six ways of arranging the tones of a sept-chord for each position. As there is a fundamental position and three inversions, there are twenty-four ways of arranging a sept-chord.

First Inversion.

Second Inversion.



Third Inversion.



From the above examples it will be observed there are twenty-four ways of arranging a sept-chord; and it will prove a very beneficial exercise to take the V7 in the different keys, and play in the many different ways.

## 106. The Resolution of the Inverted Dominant Seventh.

The same principles are to be observed in the ordinary resolution of the inverted sept-chord ( $V_7$ ) as in the fundamental position; i. e.,

First. The seventh descends one degree.

Second. The third (leading tone) ascends one degree.

Third. The fundamental (as it is in the upper voice) remains stationary.

Fourth. The fifth may move to any tone of the chord which follows.



Complete tonic triads follow inverted dominant sept-chords.

## 107. Inverted Sept-Chords and Cadences.

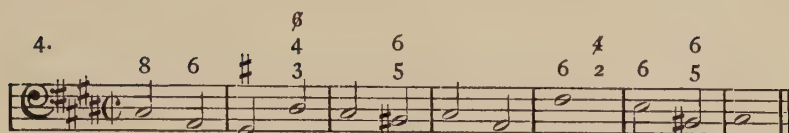
The ordinary resolution of the dominant sept-chord in a fundamental position definitely establishes a close. For this reason it is very desirable at the close of a composition, but less so at other places where a feeling of complete rest is not desired. The feeling of close that is so pronounced is in the fundamental position of this chord with its ordinary resolution; however, it is not so noticeable when the inverted positions are used.

EXERCISE:—Write the three upper voices to the following basses.

1.

2.

3.



## QUESTIONS.

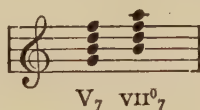
- 104 What is a fundamental sept-chord? How many ways can the tones of a fundamental sept-chord be arranged?
- 105 What is an inverted sept-chord? How many ways can the tones of an inverted sept-chord be arranged?
- 106 What is the ordinary resolution of an inverted  $V_7$ ?
- 107 How is the inverted  $V_7$  used in cadences?

## Chapter XIV.

SEPT-CHORDS ON THE LEADING TONES ( $\text{vii}^0_7$ - $\text{vii}^0_7$ )  
AND THE SECOND DEGREE ( $\text{ii}^0_7$ ) OF THE MINOR.

## 108. The Sept-Chord on the Seventh Degree of the Major.

This sept-chord is one of the small sept-chords; i. e., the combination of two small thirds and one large third. It is the reverse of the dominant, having the large third above the two small thirds.

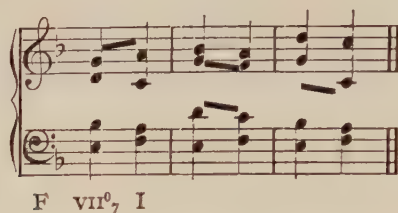


## 109. Ordinary Resolution.

In the ordinary resolution of all sept-chords, the seventh descends one degree. In the  $\text{vii}^0_7$  the fundamental is the leading tone, and instead of skipping up or down, has decided melodic tendency to the tonic, so it *ascends* one degree. The fifth descends one degree, while the third may move according to conditions and circumstances. The fundamental of the  $\text{vii}^0_7$ , unlike the dominant, *cannot be doubled*, as it is the leading tone.



*No tone in the diminished sept-chord may be omitted or doubled.*



F VII<sup>0</sup><sub>7</sub> I

### 110. The Sept-Chord on the Second Degree of the Minor.

This sept-chord contains the same intervals as the VII<sup>0</sup><sub>7</sub> of the major. In the ordinary resolution of this sept-chord, the fifth and seventh descend one degree, and the root and third remain stationary. The resolution is in to the V<sub>7</sub> (a). The fundamental may ascend a fourth or descend a fifth (b). In such a progression, the root of the V<sub>7</sub> will be doubled and the fifth omitted.



a II<sup>0</sup><sub>7</sub> V<sub>7</sub>

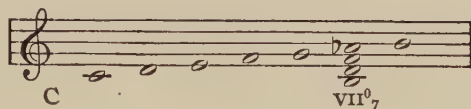
### 111. The Diminished Sept-Chord.

The diminished sept-chord, VII<sup>0</sup><sub>7</sub> of the minor, is the most pliable of all sept-chords.



The seventh of the diminished sept-chord may resolve one degree down (a); remain stationary (c); or may occasionally ascend (d). The root, which is the leading tone, usually ascends one degree to the tonic (a); it may remain stationary (b); it may sometimes descend. This last case is usually in a change of key.

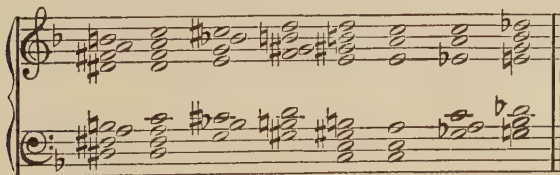
This chord occurs on the seventh degree of the minor scale; however, it is frequently found on the seventh of the major, when the sixth degree of the major scale is chromatically lowered one half-step. (See Chap. XXV.)



## 112. Diminished Sept-Chords in Succession.

Consecutive diminished sept-chords often occur; as will be seen by the following examples.

Bach. Chromatic Fantasia.





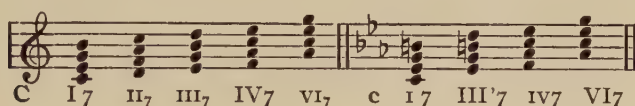
## Chapter XV.

### COLLATERAL (SECONDARY) SEPT-CHORDS.

#### 113. Location of Collateral Sept-Chords.

The sept-chords on the remaining degrees of the scale, i. e., I, II, III, IV and VI of the major, and I, III', IV and VI of the minor mode are called *Secondary* or *Collateral Sept-Chords*. These sept-chords are more harsh and require a careful consideration. Those with small sevenths are less harsh than those with large sevenths.

The sept-chords upon the I, IV of the major mode, the I, III', VI of the minor mode have *large sevenths*, or if inverted, *small seconds*, so are very dissonant.



**NOTE:**—Until recently the composer held strictly to the observance of the long-established rules, but as rules are deducted from compositions, a modern composer totally disregards many of the rules and principles used formerly. All former rules must be greatly modified for modern analysis and writing.

#### 114. Preparatory Tones.

A tone is said to be *prepared* when it is held over (tied) from the preceding chord.



A tone which is not prepared is said to *enter free*.

There was a time when the seventh in all sept-chords required a preparation, but in modern music the sevenths of the  $V_7$  of the major and minor mode, the  $vii^\circ_7$  of the major and the  $III'^\circ_7$ ,  $vii^\circ_7$  of the minor mode are allowed to enter free.

Chopin. Op. 37. No. 1.

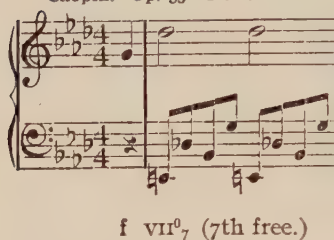


g  $V_7$  (\*7th prepared.)

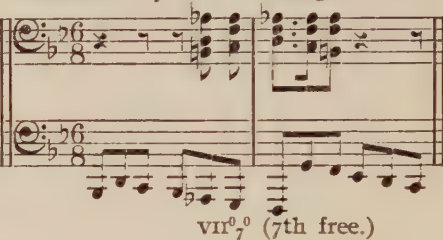
Brahms. Op. 117. No. 3.



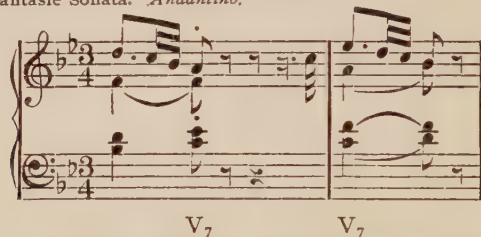
Chopin. Op. 55. No. 1



Schumann. Op. 12. Aufschwung.



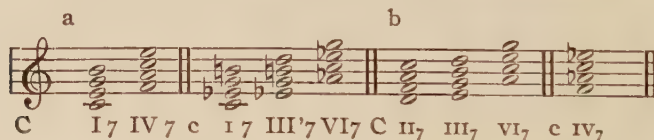
Mozart. Fantasie Sonata. Andantino.



In the first measure of the Mozart example, the fundamental is prepared; in the second, the fundamental and seventh enter free.

## 115. Chords with Large Sevenths.

The sept-chords on the I and IV degrees of the major mode, and the I, III' and VI of the minor mode (a), are more harsh than those on the II, III and VI of the major, and the IV of the minor (b), owing to the large sevenths; but none of these chords are as smooth as the sept-chords previously referred to; i. e., the  $V_7$  and  $VII_7^0$  of the major and the  $II_7^0$ ,  $V_7$  and  $VII_7^0$  of the minor modes.



The harshness of these chords is broken if the *seventh* or *fundamental* be prepared.



## 116. Ordinary Resolution of Collateral Sept-Chords.

The ordinary treatment and resolution of all collateral sept-chords is as follows:

First. The seventh is *usually prepared*. The root may be prepared, and the seventh enter free.

Second. The preparation (the tone held over) should be as *long* or *longer* than the seventh, in order to emphasize the preparation.

Third. The preparation generally occurs on the *unaccented* beat of the measure, and the seventh on the *accented* beat.

Fourth. The seventh *descends* one diatonic degree.

Fifth. The fundamental *ascends* a fourth or *descends* a fifth.

Sixth. The third may *descend* a third or be *retained* in the following chord, if this chord be a sept-chord.

Seventh. The fifth *generally descends* one degree, or may be omitted.

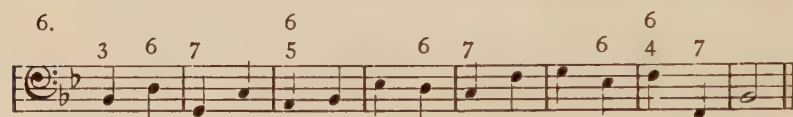
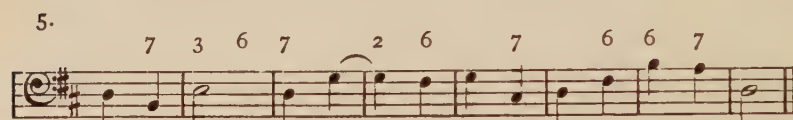
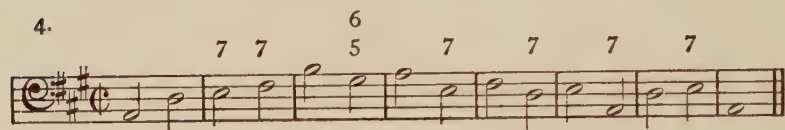
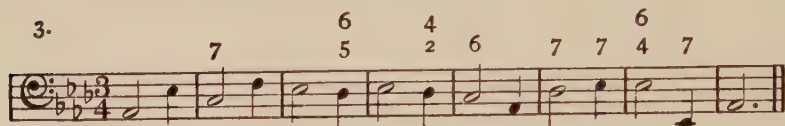
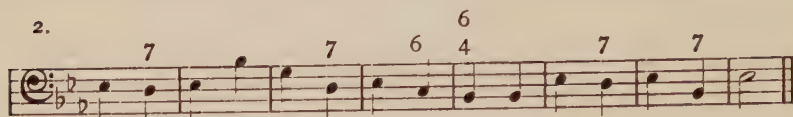
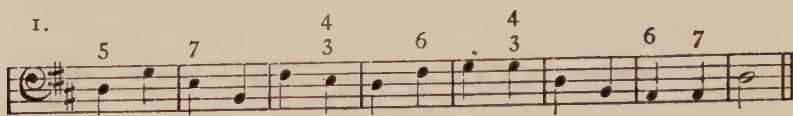
Eighth. The fundamental may be *doubled*; the seventh can *never* be doubled.

I 7   IV   V 7   I            I 7   IV   V 7   I

I   II 7   V   V   II 7   V 7   II   III 7   VI   IV   III 7   IV

I   IV 7   VII 0   II   IV 7   VII 0   V   VI 7   II   IV   VI 7   II

EXERCISES:—to be harmonized.



### QUESTIONS.

- 113 What are the collateral sept-chords? Which are the more satisfactory?
- 114 What is meant by "preparing" a tone?
- 115 How may the harshness of a discord be broken?
- 116 What is the ordinary resolution of the collateral sept-chord?

ANALYSIS:—Select easy chorals, hymns, songs and piano compositions in the major mode and analyze the same as outlined on page 53. Use compositions containing sept-chord of the II<sup>7</sup>, V<sup>7</sup> and VII<sup>07</sup>, and their inversions; indicate whether the sevenths enter free or are prepared.

## Chapter XVI.

### COLLATERAL SEPT-CHORDS OF THE MINOR MODE.

#### 117. Collateral Sept-Chords of the Minor Mode.

Collateral sept-chords in the minor occur in the I, III', IV and VI degrees.

The collateral sept-chords in the minor keys are more restricted than those in the major, owing to the augmented second that is encountered. The following resolution of the sept-chords of the minor mode, according to the principles established for the major key, will demonstrate the difficulty.

Bad.	Good.	Bad.	Bad.	Good.
------	-------	------	------	-------

a I<sub>7</sub> IV    II<sub>7</sub> V    III'<sub>7</sub> VII    V<sub>7</sub> VII°    VI<sub>7</sub> II

#### 118. Resolution.

The seventh of the sept-chord on the first degree of the minor is a leading tone, and is obliged to ascend a diatonic half-step.

a V I<sub>7</sub> IV

The sept-chord on the third degree resolves to the triad a fourth above.

a V III'<sub>7</sub> VI

The sept-chords upon the  $\text{IV}$  and  $\text{VI}$  degrees resolve into the diminished triads a fourth degree above. These resolutions are not often employed.

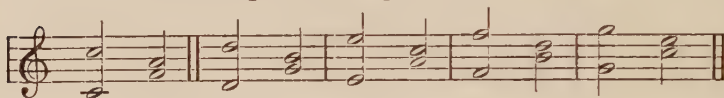


a  $\text{IV}_7$   $\text{VII}^0$   $\text{VI}_7$   $\text{II}^0$

### 119. Sequence.

A *Sequence* is a regular repetition of a given form or model on a different key.

Model.      • Sequence.      Seq.      Seq.      Seq.



A sequence may move upward or downward.

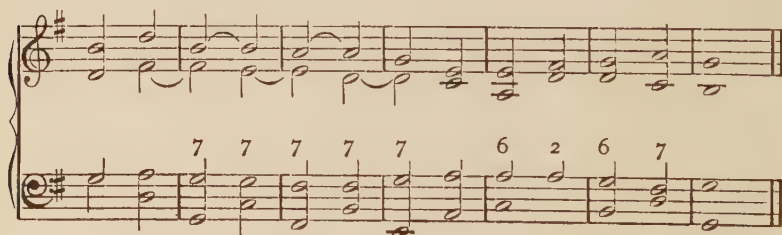
In a sequence, the different parts must hold the same position in relation to each other as established in the original model. This causes a certain laxity concerning the principles of chord connection, and all rules and principles are disregarded, excepting the principles concerning the parallel fifths and octaves.

The model of a sequence may be long or short.

A *melody* may progress in sequence, and the harmonies may be *independent* in each repetition of the form.

### 120 Consecutive Sept-Chords.

A sept-chord may resolve into the sept-chord a fourth above or a fifth below; such progressions often occur, and are very satisfactory when there are not too many in the progression.



There is no progression so *fixed* as a succession of sept-chords, excepting a *sequence*, as in each sept-chord the seventh is prepared and descends one degree, and the fundamental ascends a fourth or descends a fifth.

This natural resolution in four-part harmony necessitates the *doubling* of the *fundamental* in each alternating chord. Where the fundamental is doubled the *fifth* is *omitted*.

Only the leading of the voices can determine whether the first sept-chord should be complete or the fifth should be omitted.

## EXERCISES:—

1. 8 7 7<sup>#</sup> 6 6<sup>#</sup> 5

2. 3 6 7 7<sup>#</sup> 7 6 3 5<sup>#</sup> 7 7<sup>#</sup>

3. 7 7 7 7 7 6 2 6 4 3

4. 8 8 4 4 7 7<sup>#</sup> 7<sup>#</sup> 7<sup>#</sup> 7<sup>#</sup> 7<sup>#</sup>

## QUESTIONS.

- 117<sup>\*</sup> Where do the collateral sept-chords of the minor mode occur?  
 Why are they more restricted than those of the major mode?
- 118 Give the ordinary resolution of each.
- 119 What is a sequence?
- 120 May sept-chords follow each other? Give the ordinary resolution of the tones in such progressions.

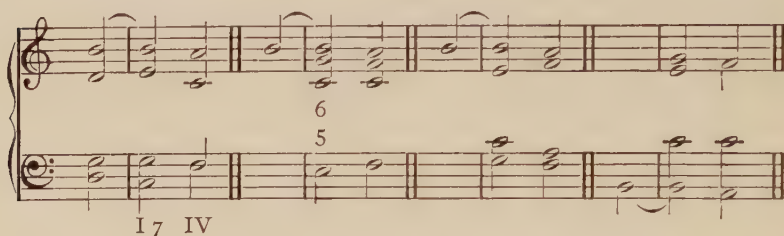


## Chapter XVII.

### INVERSION OF THE SECONDARY CHORDS OF THE SEVENTH.

#### 121. Resolution of Inverted Sept-Chords.

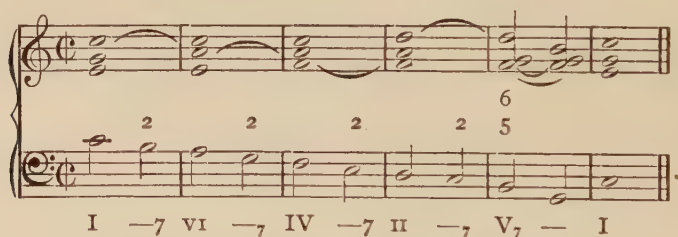
The ordinary resolution of all inverted sept-chords is, like the fundamental sept-chord, into a triad of a sept-chord a fourth degree above or a fifth degree below, excepting the sept-chord on the  $\text{VII}^0$  of the major and minor mode.



In the above examples, the introduction and resolution is in accordance with the established principles; i. e., the seventh or fundamental is prepared, and the seventh descends one degree.

#### 122. Passing Sevenths.

The seventh in the collateral sept-chord may enter free, if a voice moves down diatonically from the root of the chord, passing through the seventh, to the diatonic tone. This progression is called a *Passing Seventh*.

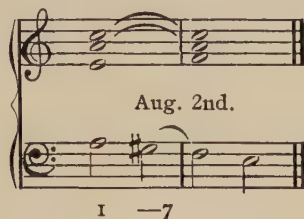


The voice that has the root of the chord remains stationary, in order to avoid the harshness caused by the passing seventh. Such progressions of the seventh are more melodic than harmonic.

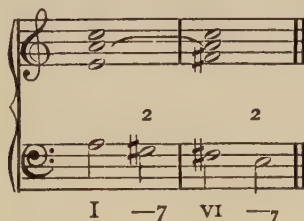
#### 123. The Leading Tone as a Passing Seventh.

The leading tone in the major mode may be employed as a passing seventh. The leading tone in the harmonic minor scale *cannot*

be employed as a passing seventh, owing to the augmented second between the sixth and seventh degrees.



The seventh of the minor mode may be employed as a passing seventh if the melodic form is used, as the *sixth* and *seventh* below are chromatically raised in this form of the melodic mode.



## EXERCISES:—

1. 8 4 4 6 2 6 6 6 4 7  
3 3 5

2. 6 6 4 6  
3 2 5 4 7 2 6 3 6 4 7

3. 6 6  
3 2 6 2 6 4 2 6 5 7 7

4. 4 4 4  
8 6 2 3 6 3 7 7 3

5.  $\beta$  3  $\overset{6}{\#}$  2 6  $\beta$  4 3 6 7  $\overset{4}{3}$   $\#$  6 6  $\overset{7}{\#}$

6. 8  $\beta$  5 6  $\overset{-4}{7}$  3  $\#$  2 6  $\beta$  7 5 7

7.  $\beta$  8  $\overset{4}{3}$   $\overset{7}{\#}$   $\overset{4}{3}$  6 5 7  $\overset{4}{3}$   $\overset{7}{\#}$

## QUESTIONS.

- 121 Give the ordinary resolution of the collateral sept-chords.  
 122 What is a passing seventh?  
 123 May a leading tone be employed as a passing seventh?

## Chapter XVIII.

## DECEPTIVE CADENCES.

## 124. Deceptive Cadences.

In the ordinary resolution of the dominant sept-chord it resolves to the tonic. A dominant sept-chord may be followed by any other chord in the scale, excepting the triad on the seventh degree. If the dominant sept-chord is followed by any chord excepting the tonic, it is called a *Deceptive Cadence*.

## 125. Seventh Descending.

The *seventh* of the dominant sept-chord may descend one degree, as in its ordinary resolution, but instead of becoming the *third* of the tonic triad, it may become the *first* of the chord on the *third* degree (a), and the *fifth* of the chord on the *sixth* degree (b).

a                      b                      a                      b

B $\flat$  V $_7$  III    V $_7$  VI    b V $_7$  III'    V $_7$  VI

## 126. Seventh Stationary.

The seventh may *remain stationary* and become the *first* of the chord on the *fourth* degree (a), the *third* of the chord on the *second* degree (b), or (in modulation) the *seventh* of another sept-chord (c).

a                      b                      c                      a                      c

B $\flat$  V $_7$  IV    V $_7$  II    B $\flat$  V $_7$  g $\sharp$  VII $_7^0$     b V $_7$  IV    b V $_7$  g $\sharp$  VII $_7^0$

## 127. Seventh Ascending.

The seventh may *ascend one chromatic half-step* (a), or *one diatonic half-step* (b), in modulation; or as a passing tone upward, or it may ascend one degree (c), or it may skip up (d).

a

7 7 7 7 7 2 7 7

C V $_7$  G V $_7$  C V $_7$  e V $_7$  C V $_7$  e VII $_7$  C V $_7$  b V $_7$

b                      c                      d

6 4

7 5 7 3

C V $_7$  e $\flat$  I C V $_7$  d VII $_7^0$  C V $_7$  d V $_7$

## 128. Ascending a Whole Step.

The seventh of the dominant sept-chord may ascend one whole step, and become the *fifth* of the tonic. This is *not* a deceptive cadence, as the dominant is followed by the tonic. It is called an *Irregular Resolution*.

7 6    7 6

The dominant sept-chord may take another position of itself. (As in the case of triads.)



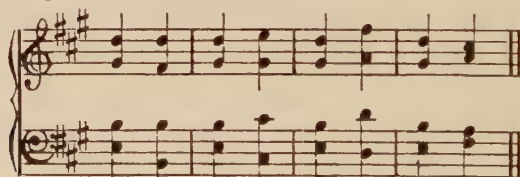
### 129. Interrupted Seventh.

The seventh of a dominant sept-chord can be interrupted before its resolution.



### 130. Progression to a Triad not the Tonic.

A dominant sept-chord of the major or minor mode may resolve to any triad in the same mode, excepting the diminished triad on the seventh degree.



A V<sub>7</sub> II V<sub>7</sub> III V<sub>7</sub> IV V<sub>7</sub> VI



a V<sub>7</sub> II<sup>0</sup> V<sub>7</sub> III<sup>0</sup> V<sub>7</sub> IV V<sub>7</sub> VI

### 131. Progression to Another Sept-Chord.

The dominant sept-chord may progress to another sept-chord in the same key.



A V<sub>7</sub> II<sub>7</sub> III<sub>7</sub> IV<sub>7</sub> VI<sub>7</sub> VII<sub>7</sub>

a V<sub>7</sub> II<sub>7</sub> III<sub>7</sub> IV<sub>7</sub>

### 132. Progression to Another Dominant.

*The dominant sept-chord may progress to any other dominant sept-chord.*

**NOTE:**—The student should keep in mind the fact that the V<sub>7</sub> is the same for a major as a minor mode.

G A<sup>b</sup> — A — B<sup>b</sup> — B — C — D<sup>b</sup>

— D — E<sup>b</sup> — E — F — F<sup>#</sup>

Some of the above illustrations are seldom used, but all may be found in compositions by the best writers.

In deceptive cadences, a contrary motion with the bass and upper voice is generally most satisfactory.

#### EXERCISE:—

Connect the V<sub>7</sub> in the keys of D, E-flat and A major, and f, g, and c-sharp minor:

First. With the triads in the same key, letting the seventh descend.

Second. By retaining the seventh.

Third. By the seventh ascending a half-step.

Fourth. By the seventh ascending a whole step.

Fifth. By the seventh taking another tone of the same chord.

Sixth. Connect them with every other triad (in the same mode), excepting the diminished.

Seventh. With every other sept-chord (in the same major modes).

Eighth. With every other V<sub>7</sub>.

### 133. Irregular Resolutions of Collateral Sept-Chords.

The irregular resolution of the dominant sept-chord only forms a deceptive progression. However, all sept-chords may resolve irregularly, but as they lack the melodic tendency of the tones contained in the dominant, such irregular progressions are not so noticeable; as in the case of the dominant sept-chord, the seventh may descend, remain stationary, or ascend by degrees in whole steps or half-steps.

The following are a few examples of the irregular resolution of collateral sept-chords.

Seventh descending.

Modulation.

C I<sub>7</sub> IV<sub>7</sub> V c II<sub>7</sub> III IV<sub>7</sub> V C II<sub>7</sub>, a V C IV<sub>7</sub>, g V<sub>7</sub>

Seventh stationary.

Modulation.

C I<sub>7</sub> VII<sup>0</sup> II<sub>7</sub> VI c II<sub>7</sub> VI IV<sub>7</sub> IV C II<sub>7</sub> g V<sub>7</sub> C II<sub>7</sub> e VII<sup>0</sup> VII<sub>7</sub>

Seventh ascending.

Modulation.

C II V<sub>7</sub> IV<sub>7</sub> V<sub>7</sub> c II V<sub>7</sub> II<sub>7</sub> VII<sup>0</sup> VII<sub>7</sub> C II<sub>7</sub> g V<sub>7</sub> c II<sub>7</sub> a V<sub>7</sub>

EXERCISES:—

1.

5 6 5 5 7 6 5 6 6 7 7

2.

7 6 4 3 3 7 6 4 5 3 7 6 6

3.

4.

5.

6.

7.

8.

## QUESTIONS.

- 124 What is a deceptive cadence? Why so called?
- 125 To what chords may the dominant sept-chord resolve and let the seventh descend?
- 126 To what chord may the  $V_7$  resolve, the seventh remaining stationary?
- 127 May the seventh ascend a half-step?
- 128 May the seventh ascend a whole step? How?
- 129 How may the seventh be interrupted?
- 130 To what triads may the  $V_7$  progress?
- 131 To what sept-chords may the  $V_7$  progress?
- 132 To what  $V_7$  may a  $V_7$  progress?
- 133 May collateral sept-chords resolve irregularly?

## Chapter XIX.

### EMBELISHMENTS, OR ORNAMENTAL TONES.

Having discussed the chords most commonly used, it will be necessary, before progressing further, to introduce the subject of *Embellishments*.

#### 134. Embellishments.

An *Embellishment* in music is a tone *foreign* to the harmonic structure of the chord with which it is used. Embellishments may be arranged above or below the **chordic tones** of a chord.

Embellishments are classed as appoggiaturas, alternating tones, mordants, passing tones, trills, turns and suspensions.

#### 135. Passing Tones.

A *Passing Tone* is a tone foreign to the harmony which is employed upon the unaccented part of the measure, and is used in passing from one tone of a chord to another tone of the same chord, or to a tone of another chord.

Passing tones may be chromatic or diatonic. A small third contains two passing tones, one diatonic and one chromatic. A large third may employ three passing tones, one diatonic and two chromatic.

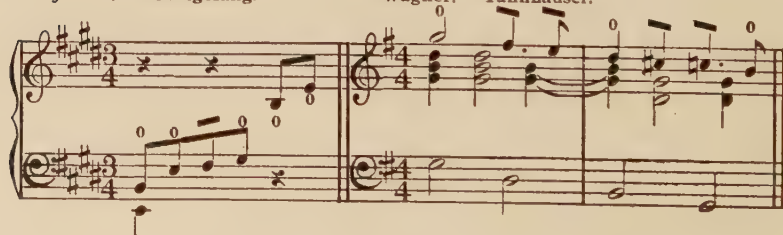
(0) Indicates chordic tones.

(—) Indicates passing tones.



Jensen, "Brantgesang."

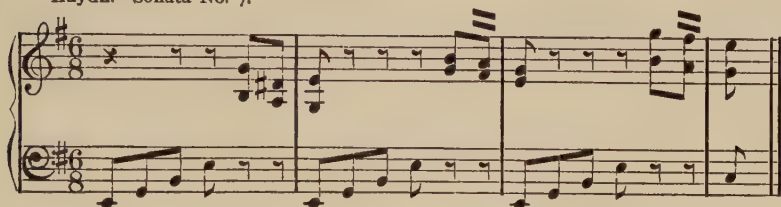
Wagner, "Tannhauser."



### 136. Ornamental Tones in Two or More Parts.

*Ornamental Tones* may be employed in two or more parts, diatonically or chromatically, if the voices move in the parallel progression of thirds or sixths, or by contrary motion.

Haydn. Sonata No. 7.



Stein. Op. 43.



Diatonic passing tones may be employed in two parts in contrary motion. When passing tones are employed in contrary motion, a simultaneous progression of chromatic or diatonic tones can be used only where the voices use a large third (a). If a small third is used the simultaneous progression *must* be *diatonic* (b).

a



b



### 137. Appoggiaturas.

An *Appoggiatura* (Italian, *appoggiatura*, to lean) is a tone foreign to the harmony, appearing upon the accented beat of the measure, a diatonic degree above or below a chordic tone of the chord to which it must resolve.

Appoggiaturas from below are found on the diatonic half-step, while those above may be whole or half-steps.



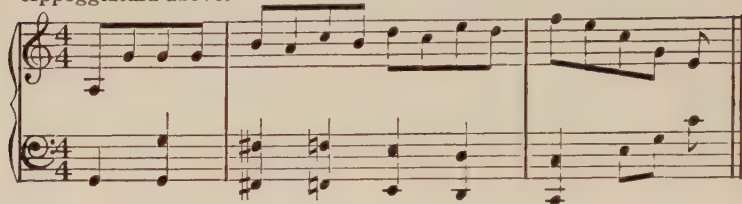
\* Indicates an appoggiatura.



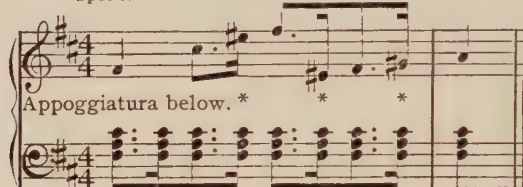
Appoggiaturas are commonly called *grace notes*.

Haydn. Creation—"The Heavens are Telling."

Appoggiatura above. \* \* \* \* \*



Spontini. "Ferdinando Cortez."



### 138. Double Appoggiatura.

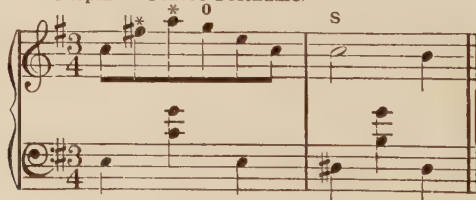
An appoggiatura generally resolves directly to the tone above or below which it occurs; however, an appoggiatura may move from the appoggiatura above or below to the other; i. e., the appoggiatura below may move to the appoggiatura above, or the one above to the one below, and then resolve to the tone above or below which it occurs. Such a progression is called a *Double Appoggiatura*.

Weber. Op. 72.



(S) Indicates Suspension.

Chopin. "Oeuvre Posthume."



### 139. Alternating Tones.

An *Alternating Tone* is a tone foreign to the harmony, and occurs upon the unaccented part of the measure, above or below a tone of the chord which is sounded upon the accented beat of the measure. An alternating tone resolves back into the chordic tone of the chord.

An alternating tone above is a diatonic tone. It may be a whole step or a half-step.

(^) Indicates alternating tones above; (v) indicates alternating tones below.



An alternating tone below is more satisfactory if it forms a diatonic half-step.



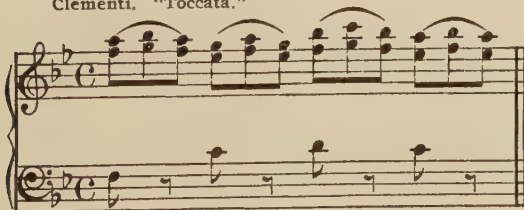
Moszkowski. Op. 12. No. 2.

Raff. "Gavotte."



Two above.

Clementi. "Toccata."



Two below.

Bach. Bourrée. No. 2.

Three parts.

Chaminade.

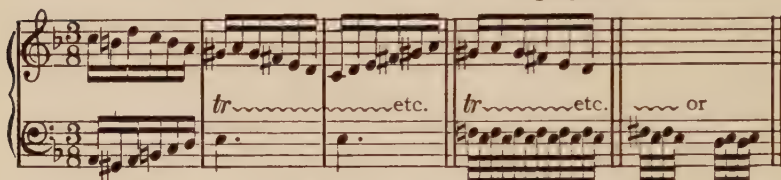


## 140. Trill.

A *Trill* is a combination of alternating tones *from above*.

Bach Invention. "Two part". No. 4.

To be played, and not



In this example, it is often played F-sharp; it should be remembered that the modulation is to a-minor, and the upper part is F-sharp and G-sharp. These tones belong to a-(melodic) minor. The lower tone, E (the dominant of a-minor), is an harmonic tone, and as a-minor (harmonic) has F natural, and F natural is the diatonic tone above, it is the *trill* tone.

The classic trill, until after Beethoven's time, always ended with closing tones.

*Closing Tones* are the tones formed by the tone below the chordic tone, and returning to the chordic tone. Closing tones should be played half as fast as the trill tones.

The modern trill may, or may not, end with closing tones.

A trill may be preceded by introductory tones.

A trill may be long or short.

## 141. Mordant.

When the alternating tone foreign to the harmony is used but once, it is called a *Mordant* (to bite).

Bach Invention. No. 5.

No. 10.



A mordant is sometimes continued, and resembles a trill; a continuation of alternating tones from below is always a continued mordant. In the following quotation, the A-natural and B-flat form a mordant; B-flat is the harmonic tone. Such illustrations are rare. The trill is on B-flat with C, and the last A and B form closing tones.

Beethoven. Op. 27. No. 1.



## 142. Turn.

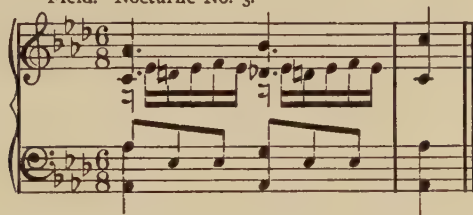
A combination of two alternating tones, one from above and one below, form a *Turn*.

Dusseck. "La Matinee."

Czerney. Op. 299. No. 4.



Field. Nocturne No. 3.



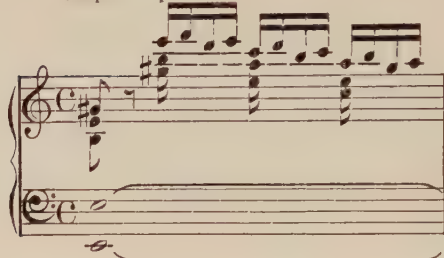
## 143. Interrupted Alternating Tones.

Interrupted progressions of alternating tones often occur in the principal tones of a third or sixth, also where the tone foreign to harmony is a principal tone of the following chord.

Beethoven. Op. 10. No. 1.



## Chopin. Op. 10. No. 2.



In the Chopin Etude, the first of each group of sixteenths is a chordic tone, the second an interrupted alternating tone, the third a passing tone down to the chordic tone of the next group, but followed by an interrupted alternating tone.

## 144. Retardation.

One or more tones belonging to a harmony may be omitted upon the accented beat of the measure and may be sounded after the other tones of the chord. Such a progression is called a *Retardation*. All suspensions may be regarded as delayed tones. All delayed tones are not suspensions.

## 145. Anticipation.

One or more tones belonging to a chord may be sounded upon the unaccented part of the measure; the other tones employed following upon the accented beat. Such tones are *Anticipated Tones*.

## Chopin. Polonaise, Op. 53.



## Raff. Op. 95.





## Tschaikowsky. Op. 19.

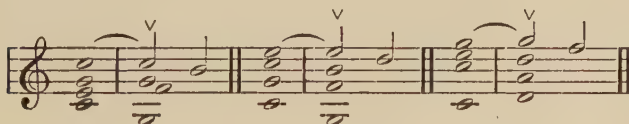


## Chopin. Nocturne. Op. 55.



## 146. Suspensions.

A suspension is a tone foreign to the harmony which is prepared or tied over from a principal tone of a preceding chord. The preparation falls upon the unaccented beat of the measure, the suspension upon the accented beat, and the resolution upon the unaccented beat of the measure.



Two above.

Above and  
below.

Two below.



Entering free.

Kuhlau. Op. 20. No. 3.



A more thorough treatment on suspensions will be given later on.

### 147. Application of Embellishments.

All embellishments have more the character of melody than harmony, and should be treated as melodic progressions.

Embellishments are subjected more to the melodic demands than to the principles governing four-part writing.

Embellishments may be employed in any voice.

Embellishments should not be sounded simultaneously with their resolution tone, unless the latter appears an octave removed from the former.

### QUESTIONS.

- 134 What is an embellishment?
- 135 What is a passing tone?
- 136 How may ornamental tones be employed in two or more parts, in parallel motion? How may passing tones be employed in contrary motion?
- 137 What is an *appoggiatura*?
- 138 What are double *appoggiaturas*?
- 139 What is an alternating tone?
- 140 What is a trill? What is the difference between the classic and modern trill? What is understood by closing tones? Introductory tones?
- 141 What is a mordant? When does a mordant resemble a trill?
- 142 What is a turn?
- 143 What is an interrupted alternating tone?
- 144 What is understood by retardation?
- 145 What is understood by anticipation?
- 146 What is understood by suspensions?
- 147 Are embellishments melodic or harmonic? How are embellishments affected by the general principles of part-writing?

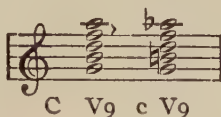
## Chapter XX.

### CHORDS OF THE NINTH, ELEVENTH AND THIRTEENTH.

#### 148. Chords of the Ninth.

By adding a third to a sept-chord, a *Chord of the Ninth* is formed.

*Principal Ninth Chord.* As the dominant sept-chord is the principal sept-chord, the dominant ninth is the principal chord of the ninth.



The ninth of the dominant in the major mode is a large ninth; in the minor mode, it is a small ninth. Sometimes the ninth of the dominant ninth in the major mode (which is the sixth of the scale) is lowered, as in previous examples. This gives a small ninth of the dominant ninth of the major.

In the above illustration, in the first chord, the V9 of C major, if the sixth of the scale were lowered, it would be A flat—making it a small ninth as in c minor V9.

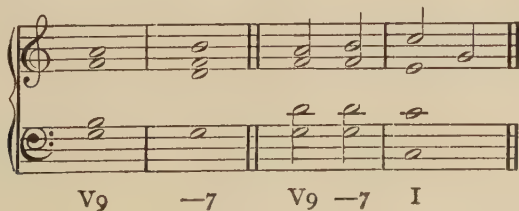
While it is possible to form chords of the ninth on any degree of the major and minor scale, few chords of the ninth have any harmonic value, as the ninth of such chords can in most cases be regarded as embellishments; i. e., appoggiaturas, suspensions, passing tones, or alternating tones.

#### 149. The Application of the Chord of the Ninth.

As the principal chord of the ninth is the V9, its treatment must be the same for the tones in the sept-chord on the fifth degree. As there are five tones in the chord, one must be omitted in four-part writing.

*No tone of the ninth chord can be doubled.*

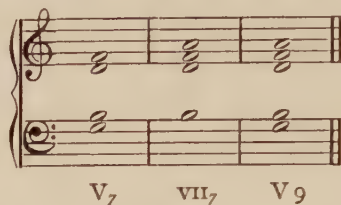
The root, seventh and ninth cannot be omitted. Either the third or fifth must be omitted. As the third is the leading tone, it is generally best to omit the fifth. The third may be omitted occasionally, especially if it appears as one of the chordic tones in the following chord.



### 150. Establishes a Key.

A chord of the ninth establishes the key and the mode, excepting where the sixth is chromatically lowered. The  $V_7$  establishes the key, but not the mode.

The complete dominant ninth chord is a combination of two sept-chords; one on the dominant, and the other on the leading tone.



### 151. Ordinary Resolutions.

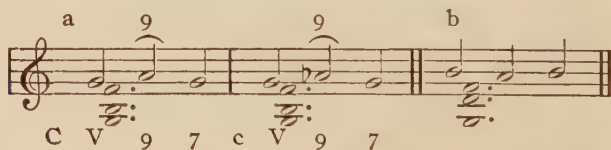
The fundamental or ninth of the dominant ninth may enter free, or may be prepared.

The ninth generally descends one degree, and the other tones resolve like the tones of the dominant sept-chord.

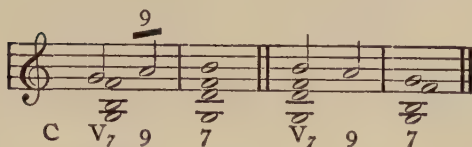


### 152. How the Ninth May be Employed.

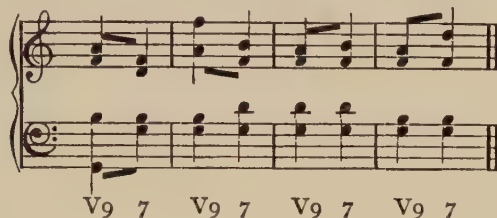
The dominant ninth may be employed in an upper voice when it moves from the root of the dominant sept-chord up one degree to the ninth and back (a); or from the third down to the ninth and back (b). In this case it resembles an alternating tone.



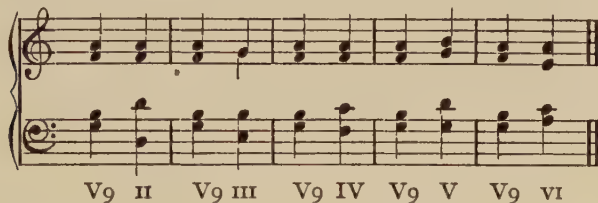
The dominant ninth may be employed by ascending from the root of the dominant sept-chord diatonically through the ninth up to the third of the chord, or descending from the third through the ninth to the root. In this case the ninth resembles a passing tone.



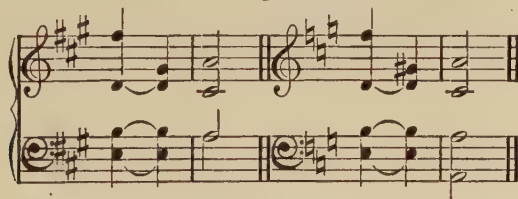
The ninth may proceed to any tone of a following sept-chord, excepting the root; or to a triad not the tonic.



The ninth may proceed to a triad on other degrees than the tonic.



The ninth may descend a seventh to the third of the dominant, when it has been omitted in the previous formation.



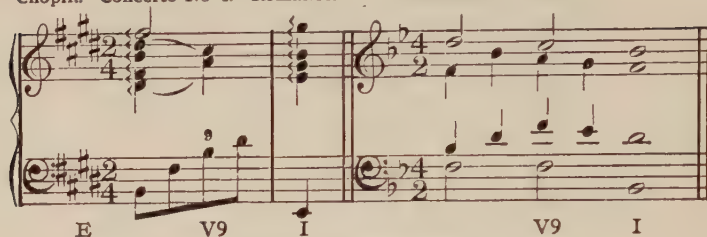
### 153. Inversion of the Chord of the Ninth.

There are only certain instances where the inversion of the chord of the ninth is employed. Any inversion is practicable where the ninth is above the root, and remains at the distance of a ninth from the root. This is absolutely necessary in pure part-writing.

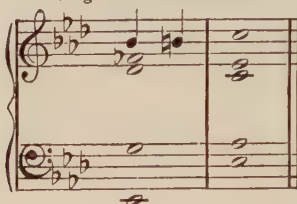




Chopin. Concerto No. 1. Romance. Mendelssohn. Choral.

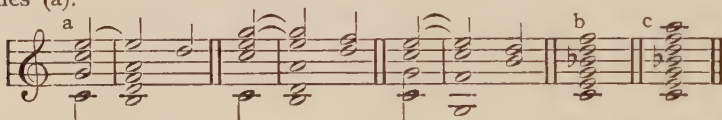


Wagner. Die Walküre.



## 154. Accidental Diatonic Chords.

There are other combinations that may be formed by the diatonic tones (a).



By adding a third to the ninth you will form a chord of the eleventh (b); and a third to the chord of the eleventh forms a chord of the thirteenth (c). Here, with the chord of the thirteenth, we reach the limitation of diatonic possibilities, as another third added to the thirteenth would begin our series of thirds again.

Chords of the eleventh and thirteenth may generally be regarded as accidental formations, rather than diatonic chords. The elevenths and thirteenth are generally introduced as suspensions or appoggiaturas.

The following examples will show that such chords are sometimes used, though we will not consider them in four-part harmony.

Beethoven. Symphony No. 9. Liszt. Faust Waltz.



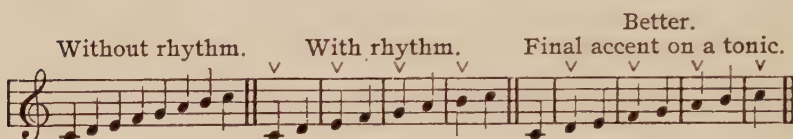


## Chapter XXI.

### MELODIES.

#### 155. Melody.

A melody is a chain of single tones according to the laws of rhythm.



Such successions may ascend or descend, in conjunct (by degrees) or disjunct (by skips) movements, or the melodic tones may be repeated.



#### 156. Perfect Melodies.

A melody must close on a tone of the tonic triad, and, to be well regulated in a rhythmic way, should have a variety of note values.

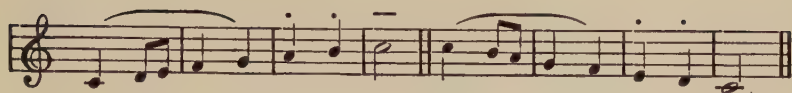
In the following examples, C and D are more satisfactory than A and B. The tones are not all of the same value, and the arrangement suggests a musical thought. They also close in such a manner as to suggest a cadence, or rest.



The two examples, C and D, are not satisfactory in one respect; i. e., in example C the tones are all ascending, and at D the tones are descending.

In the ascending passage it is easy to perceive the effect of *tension*; and in the descending passage, the effect of *relaxation*; neither, to the exclusion of the other, is considered good.

By combining the two, a tone chain of two sections is formed, each balancing the other. Such a formation of two sections is called a *Period*.



### 157. Parts of a Melody.

Any group of notes given a rhythmic design may be considered as a *Theme* or *Motive*.

The motive may be long or short. Every composition contains motives developed into phrases, and phrases into sections, sections into periods.



### 158. Development of Motives.

There are many ways of developing a motive; a few of which will be given in the following examples:

Motive.



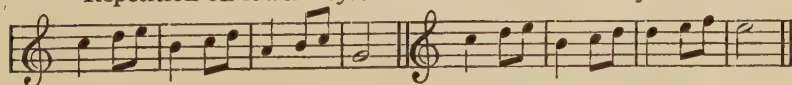
Repetition on same key.

Repetition on higher keys.



Repetition on lower keys.

Repetition on higher and lower keys.



Inversion.

Contraction. (Exchanging a larger for a smaller interval.)



Expansion. (Exchanging a smaller  
for a larger interval.)

Embellishing.



Augmenting the rhythmic  
value.

Diminishing the rhythmic  
design.



Transposition.



Motive.

Simplification.



These examples will suggest the many ways a motive can be developed. Two or more motives can be combined, or a combination of two or more treatments can be made. The field of possibilities is inexhaustible.

The examples given have all been conjunct; the student must remember that disjunct and repetition may be used.

EXERCISE:—Select different motives, and develop them in as many ways as possible.

## 159. Principal Part.

Any given part is a *principal* or *fixed melody*.

A given part may be in any voice.

The soprano and bass (the outer parts), in four-part progressions, should be given the first consideration.

The bass melodies should avoid: first, augmented intervals (a); second, a succession of two skips of large thirds, fourths or fifths (b); third, skips of sevenths (c).



## 160. Harmonizing.

In all of our preceding exercises the fixed part, or melody, has been given for the bass. We will now consider the harmonization of melodies for the other voices.



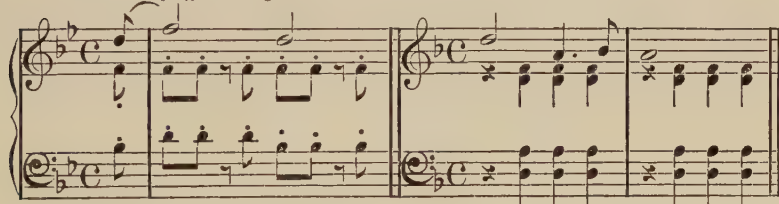
Although the voice carrying the given part may be considered as having the principal melody, each voice must be regarded as a melodic progression. All other voices are called *filling* parts. Filling parts should be as melodic in their progression as possible, but necessary liberties must be allowed these parts.

When a choice is given, i, e., when there is a question whether the soprano or one of the inner voices be the more melodic, the soprano is given the preference, and next the bass, as these voices are more noticeable than the inner parts.

It is generally considered good form, in harmonizing a melody, if a melodic tone progresses from one tone to another tone of the same harmony, to retain the harmony; but if the melodic tone repeats, to change the harmony.

Heller. Op. 47. No. 13.

No. 10.



Schubert. "Death and the Maiden."



A bass melody should end on the fundamental of the tonic.

Melodies in the upper voices may end on any tone of the tonic triad.

## 161. Melodic Tones Belong to Chords.

Every melodic tone is either a *tone of a chord*, or an *embellishment of a chordic tone*.

Every melody should be reduced by analysis to its chordic formation.

The student should study the melodies from standard works:—

First. Determine the key of each part.

Second. Determine the motives, phrases and sections.

Third. Determine which tones are harmonics.

Fourth. Determine where and how the embellishments occur.

### QUESTIONS.

155 *What is a melody? How may the tones progress?*

156 *What is necessary for a perfect melody?*

157 *What are the parts of a melody?*

158 *Name some of the ways to develop a motive.*

159 *What is a fixed part? Which voice should be given first consideration? What must be avoided in bass progression?*

160 *In which voice may a given melody occur?*

## Chapter XXII.

### HARMONIZING MELODIES.

## 162. Two-Tone Melodies.

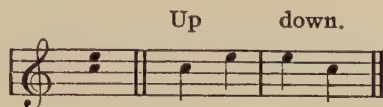
A melody is a *succession of single tones*.

It will be well to realize that any melody can be divided into groups of two tones each.

Schubert.



Before endeavoring to harmonize a developed melody, two-tone melodies will be best to consider. A two-tone melody has but two possible progressions; i. e., either from the lower to the upper, or from the upper to the lower.



In harmonizing a melody, it will be necessary to first ascertain the key in which the melody is formed. Keep in mind the leading tone, which must not be doubled, and if the melody is in a minor mode, to remember the established principles concerning the augmented second.

Especial attention must be given to the bass. It should be as melodic as possible, and move in conjunct motion as much as possible. In four-part writing wide skips are unsatisfactory for the lower voice,

A two-tone combination would be the smallest number of tones that could be used in a melodic progression, so we will first consider the possibility of harmonizing the two-tone melodies.

The small second is the *smallest diatonic interval*.

### 163. Harmonization of a Small Second.

In a previous chapter it is found that intervals may be regarded as melodic or harmonic, and in the consideration of a two-tone melody, it is found in the harmonic plural significance of tones, that an interval of two tones may be found in many keys. The smallest diatonic progression a melody can make is a small second. A small second can be in two major keys and three minor keys.

Any melody can be given to the soprano, alto, tenor or bass. Any tone of a melody may be regarded as a root, third, or fifth of a triad, or a root, third, fifth or seventh of a sept-chord, or a ninth of a chord of the ninth.

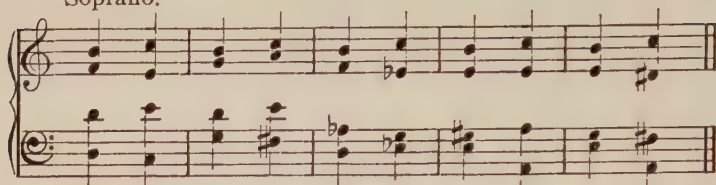
#### MELODIC EXAMPLE, B-C.

The small second, B-C, can be on the third degree of G major, and the seventh of C major, the second of a minor, the fifth of e minor, and the seventh of c minor.

The pupil should always bear in mind that each tone of a melody can be any tone of a chordic formation; i. e., the melodic tone may be used as a fundamental, third, fifth, seventh or ninth of a chord; that you can go from the root to the root, third, fifth or seventh; and from the third to the root, third, fifth or seventh; from the fifth to the root, third, fifth or seventh; and from the seventh to the root, third, fifth or seventh.

## IN DIFFERENT KEYS.

Soprano.

C VII<sup>0</sup> I G I VII<sup>0</sup><sub>7</sub> c VII<sup>0</sup><sub>7</sub> I a V I e I VII<sup>0</sup><sub>7</sub>

Alto.

C V I G III IV c V I a V<sub>7</sub> I e I VII<sup>0</sup><sub>7</sub>

Tenor.

C III I G I V<sub>7</sub> c V<sub>7</sub> I a VII<sup>0</sup> I e V<sub>7</sub> VI

Bass.

C V<sub>7</sub> VI G III V<sub>7</sub> c VII<sup>0</sup><sub>7</sub> I a V<sub>7</sub> I e I VII<sup>0</sup><sub>7</sub>

In the above examples, only one progression has been given to each key. The following examples will prove a few of the many ways possible of harmonizing the small second in one key.

C V I III I VII<sup>0</sup> I VII<sup>0</sup><sub>7</sub> I II<sub>7</sub> I V VI III VI V<sub>9</sub> I

## EXERCISE:—

1. Use C-sharp—D as a melodic progression, and harmonize it in each of its possible keys for the soprano.
2. Harmonize the melody E-F in the alto in each of its possible keys.
3. Harmonize the melody F-sharp—G in the tenor in each of its possible keys.
4. Harmonize the melody C—D-flat in the bass in each of its possible keys.

## 164. Harmonization of a Large Second.

A large second may be in eight keys on the first, second, fourth, fifth and sixth degrees of the major scale, and the first, third and fourth degrees of the minor.

## MELODIC EXAMPLE, A-B.

A-B is in A, G, E, D and C major, and in a, f-sharp, e and b minor.

Soprano.                      Alto.

Tenor.                      Bass.

A I VII<sup>0</sup> a VI V<sub>7</sub> G V<sub>7</sub> I f# VI II

E V<sub>7</sub> I e IV V D V<sub>7</sub> vi C IV VII<sup>0</sup>

## EXERCISE:—

1. Harmonize the melody C-D in the soprano in all of its possible keys.
2. Harmonize the melody G-A in the alto in all of its possible keys.
3. Harmonize the melody F-G in the tenor in all of its possible keys.
4. Harmonize the melody A-flat—B-flat in the bass in all of its possible keys.



### 165. Harmonization of a Small Third.

A small third can occur on the second, third, sixth and seventh of a major, and on the first, second, fourth and seventh of a minor.

MELODIC EXAMPLE, A-C.

A-C may be in G, F, C or B-flat major, and in a, g, e and b-flat minor.

The musical score for Exercise 165 consists of four staves, each representing a different voice part. The Soprano staff is in treble clef, the Alto in alto clef, the Tenor in bass clef, and the Bass in bass clef. Each staff contains a melody and its harmonic analysis in Roman numerals.

**Soprano:** G V<sub>7</sub> I a VI III' F I IV g VII<sup>0</sup><sub>7</sub> V<sub>7</sub>

**Alto:** C II I e VII<sup>0</sup><sub>7</sub> VI B<sup>b</sup> V II b<sup>b</sup> V<sub>7</sub> V<sub>7</sub>

EXERCISE:—

1. Harmonize the melody D-F in the soprano in all of its possible keys.
2. Harmonize the melody E-G in the alto in all of its possible keys.
3. Harmonize the melody F-sharp—A in the tenor in all of its possible keys.
4. Harmonize the melody C—E-flat in the bass in all of its possible keys.

### 166. Harmonization of a Large Third.

A large third occurs upon the first, fourth and fifth degrees of the major scale, and the third, fifth and sixth of the minor scale.

MELODIC EXAMPLE, F-A.

F-A may occur in F, C or B-flat major, and d, b-flat or a minor.

Alto. Tenor.

a ii<sup>0</sup> I F I vi b<sup>b</sup> I vii<sup>0</sup><sub>7</sub> C vii<sup>0</sup> vi d VI V B<sup>b</sup> V vii<sup>0</sup><sub>7</sub>

## EXERCISE:—

1. Harmonize the melody B-flat—D in the soprano in all of its possible keys.
2. Harmonize the melody D—F-sharp in the alto in all of its possible keys.
3. Harmonize the melody G-B in the tenor in all of its possible keys.
4. Harmonize the melody A—C-sharp in the bass in all of its possible keys.

**167. Harmonization of a Perfect Fourth.**

A perfect fourth occurs upon all the degrees of the major mode, excepting the fourth degree; and upon the first, second, third and fifth degrees of the minor mode.

## MELODIC EXAMPLE, E-A.

E-A may occur in E, D, C, A, G and F major, and e, d, c-sharp and a minor.

Soprano. Alto.

E I V<sub>7</sub> D II V<sub>7</sub> e I vii<sup>0</sup><sub>7</sub> C I II<sub>7</sub> d V<sub>7</sub> I

Tenor. Bass.

A V<sub>7</sub> I c<sup>#</sup> VI vii<sup>0</sup><sub>7</sub> G VI vii<sup>0</sup> F V<sub>7</sub> I a V<sub>7</sub> I

In the above illustrations, the reverse of these progressions could be regarded as the harmonization of the other melodic possibilities; i. e., in the harmonization of a perfect fifth, instead of using the interval G-C for a perfect fourth, it would be C-G, and as large and small sixths are, by inversion, the same as small and large thirds, large and small seconds correspond to small and large sevenths, the examples referred to can be used as a general key to the possibilities of two-tone melodies.

Augmented and diminished intervals are not very satisfactory in melodic progressions.

The chromatic alterations will be referred to later.

#### EXERCISE:—

1. Harmonize the melody D-G in the soprano in all of its possible keys.
2. Harmonize the melody C-F in the alto in all of its possible keys.
3. Harmonize the melody A-D in the tenor in all of its possible keys.
4. Harmonize the melody B-E in the bass in all of its possible keys.

#### QUESTIONS.

- 162 What must be kept in mind when harmonizing a melody?  
 163 Which tone of a chord may a melodic tone be?

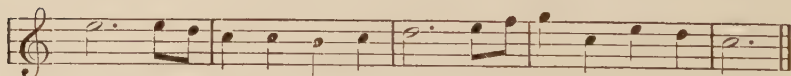
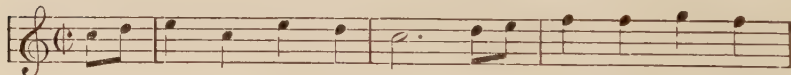
*Review Art. 27, page 27.*

---

## Chapter XXIII.

EXERCISES:—(To be harmonized with triads.)

1. Soprano.



- 2.



- 3.



4.



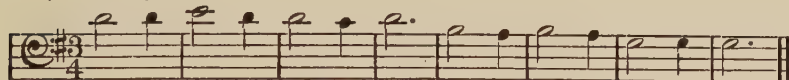
1. Alto.



2.



1. Tenor.



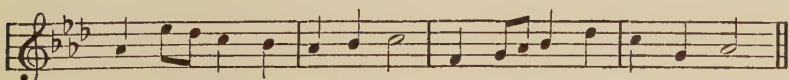
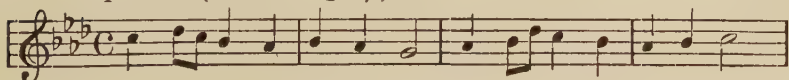
2.



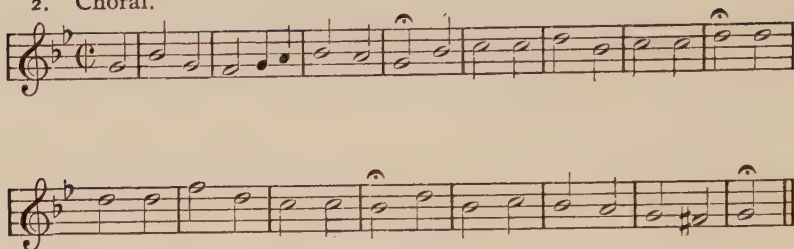
The student should develop original melodies, and harmonize them with triads.

Harmonize, and introduce sept-chords.

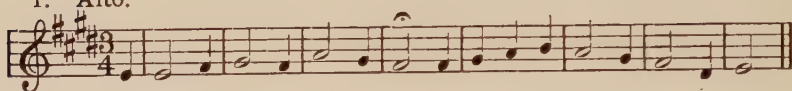
1. Soprano. (Introducing  $V_7$ .)

 $V_7 V_7 VI$  $V$  $V_7$

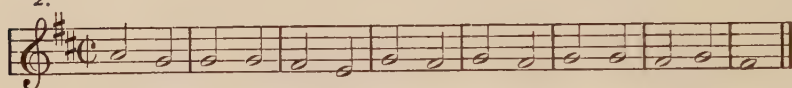
## 2. Choral.



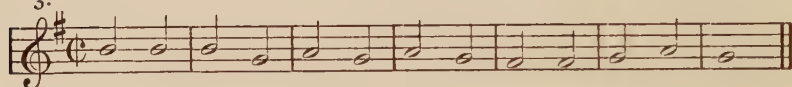
## 1. Alto.



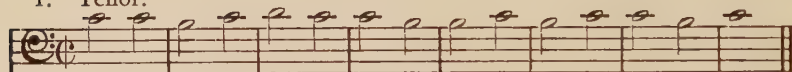
## 2.



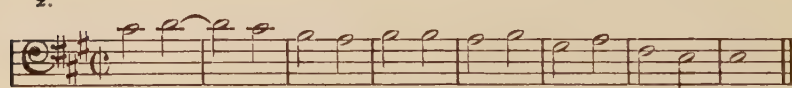
## 3.



## 1. Tenor.



## 2.



Develop original melodies, and harmonize, using dominant sept-chords.

Develop original melodies, and harmonize, using other sept-chords.



## Chapter XXIV.

### HALF-STEP PROGRESSIONS.

#### 168. Half-Step Progressions.

The chords previously dealt with are triads, sept-chords, or chords of the ninth, of a definite tonality in their fundamental or inverted positions on the various degrees of the same scale. One or more tones of any chord may be chromatically or diatonically raised or lowered a half-step. Some of the formations will not differ from original diatonic chords; others will form entirely new formations, not found among the chords of the major or minor scales. These latter will be termed chromatic chords.

Our first consideration will be given to the half-step connection of diatonic triads with other diatonic triads.

#### 169. Half-Step Connections of Triads.

Any major triad may connect with four other major triads (a); five minor triads (b); three diminished triads (c); and two augmented triads (d).

a

b

c

d

A minor triad may connect with four minor triads (a); five major triads (b); three diminished triads (c); and two augmented triads (d).

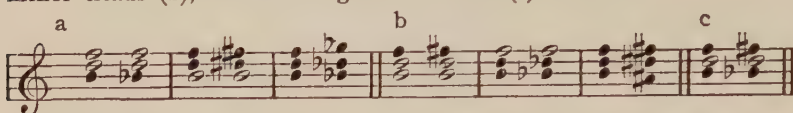
a

b

c

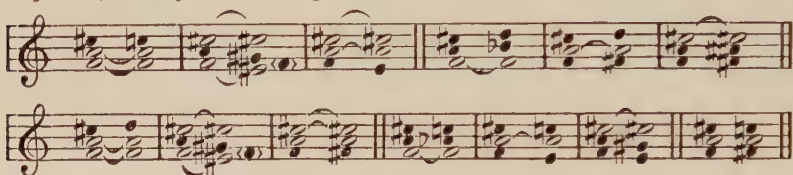
d

A diminished triad may connect with three major triads (a); three minor triads (b); and one augmented triad (c).



An augmented triad may connect with six major triads (a); six minor triads (b); and three diminished triads (c).

By raising any one or lowering any two tones of an augmented triad, a minor triad is produced; by lowering any one or raising any two, a major triad is produced.



#### EXERCISE:—

Connect the following triads with other triads, by half-step progressions:

1. The major triads of D, A-flat and E.
2. The minor triads of g, c-sharp and e-flat.
3. The diminished triads of E, D-sharp and G-sharp.
4. The augmented triads of G, F and A-flat.

### 170. Half-Step Connections of Sept-Chords.

Theoretically, any or all tones of a chord can progress a half-step. The following examples of diatonic and half-step alterations will demonstrate the many possibilities of connecting diatonic sept-chords.

Half-step connections of small sept-chords with triads.



The above connections by half-steps demonstrate that the small major sept-chord and the small diminished sept-chords connect with two major and two minor triads, one augmented and one diminished triad; and the small minor sept-chord connects with three major and three minor, one augmented and one diminished triad.

Half-step connections of large sept-chords with triads.

Major. Minor. Augmented. Diminished.

IV<sub>7</sub>

Major. Minor. Augmented. Diminished.

Major. Minor. Augmented. Dim.

### EXERCISE:—

Connect the following sept-chords with the diatonic triads by half-step progressions:

1. The V<sub>7</sub> in the key of A-flat, E and B.
2. The V<sub>7</sub> in the key of G, E-flat and B-flat major.
3. The II<sub>7</sub> of d, g-sharp and e-flat minor.
4. The II<sub>7</sub> of F, A-flat and E major.
5. The I<sub>7</sub> in A, G-flat and B major.
6. The III<sub>7</sub> in b-flat, f and g-sharp minor.

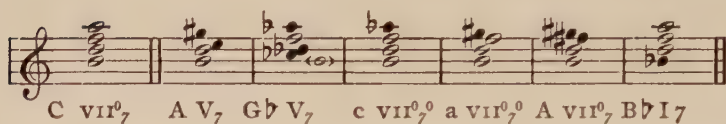
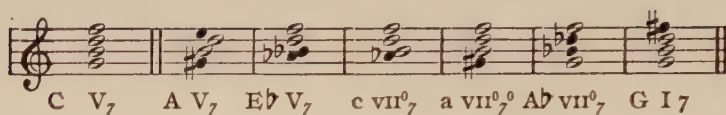
## 171. Half-Step Connections of Sept-Chords Among Themselves.

Only a few progressions by half-step connections of sept-chords among themselves will be given, but enough to demonstrate to the student the great possibilities, especially in modulation.

a b

VII<sup>0</sup><sub>7</sub> C V<sub>7</sub> A V<sub>7</sub> G<sup>b</sup> V<sub>7</sub> E<sup>b</sup> V<sub>7</sub> E V<sub>7</sub> G V<sub>7</sub> B<sup>b</sup> V<sub>7</sub> D<sup>b</sup> V<sub>7</sub>

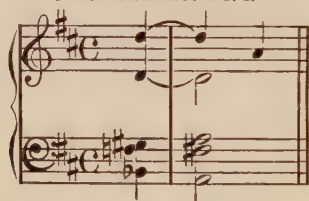
From the above connected half-step progressions of the diminished sept-chord, it will be noticed that any tone of a diminished sept-chord may be lowered one half-step, and it produces a dominant sept-chord (a); or a tone remaining stationary, and the other three raised one half-step will produce a dominant sept-chord (b).



Any chord may progress to another chord of the same character a half-step above or below. Fifths are not prohibited when the two parts forming a fifth move by half-steps.

Quotations showing half-step progressions:

Gade. Romance No. 2.

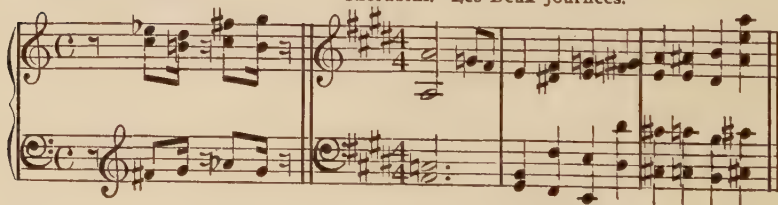


Beethoven. Op. 27. No. 2.

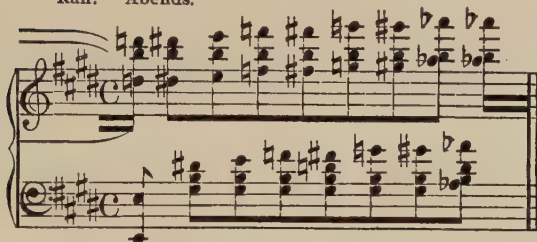


Mozart. Sonata 18.

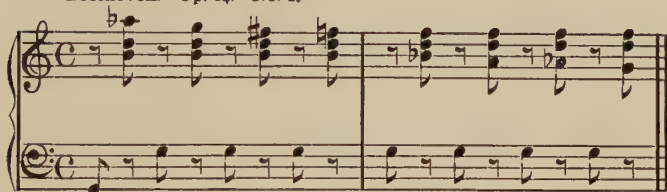
Cherubini. Les Deux Jours.



Raff. "Abends."



Beethoven. Op. 14. No. 2.



## QUESTIONS.

- 168 What is understood by half-step progressions?
- 169 Give the half-step progressions possible for the major triad; the minor triad; the diminished triad; the augmented triad.
- 170 Give the half-step progressions possible for the large major sept-chord; the large minor sept-chord; the large augmented sept-chord; the small major sept-chord; the small minor sept-chord; the small diminished sept-chord.

## Chapter XXV.

## ALTERED CHORDS.

## 172. Altered Chords.

When a chord is chromatically altered, and the thirds remain large or small, and is not used in modulation, it is an *Altered Chord*.

## 173. The Augmented Triad as an Altered Chord.

The augmented triad is rarely employed as a fundamental triad on the third degree of the minor scale. It is frequently employed as an altered chord; i. e., where the fifth of the major triad is raised.



The augmented fifth may be employed in a major or minor triad, if the step from the fifth of the triad to the degree above forms a diatonic whole step. The augmented fifth in this case always ascends a diatonic half-step, as it has the character of the passing tone upward.

When the fifth of a minor is raised, it forms a *Chromatic Chord*.—See CHAP. XXVI.

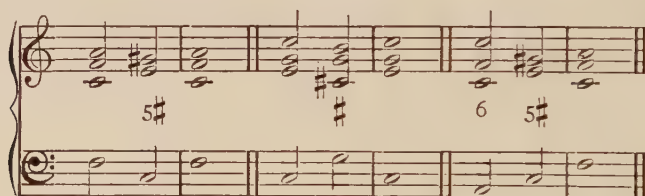


Mozart. Sonata D.

Beethoven. Symphony Heroic.



The augmented fifth may be employed in a major or minor triad, entering free.



Bach. Choral.

Niemann. Op. 24.



The triads of the augmented fifth are practicable in their first or second inversion, as in the first of the above illustrations (a).

### 174. Major and Minor Triads as Altered Chords.

The third of a major triad is often lowered, and likewise, the third of a minor triad can be raised at the end of a composition.

Bach. Fugue No. 2. Schubert. Op. 90, No. 2.

In the above illustrations, at 'a', the final tonic is not considered as a major triad, but as a minor tonic with a raised third; at 'b', a major tonic with a lowered third. Such chromatic alterations very frequently occur, as they make the composition more effective than a close with the natural tonic. The examples of majors with lowered thirds are very rare in final cadences.

### 175. Major Triads in the Second Degree of the Minor.

A triad with a chromatic alteration that is very often employed is found on the second degree of the minor. This diminished triad ( $\text{II}^0$ ) is not as satisfactory as the major triad formed by lowering the fundamental of the original diminished triad.

a  $\text{II}^0$  — with lowered root.

This triad in its first inversion is commonly spoken of as the *Neapolitan Sixth*. The author fails to see why it should be considered as a Neapolitan chord, as it was used long before the Neapolitan supremacy. It is the natural triad of the second degree of the Phrygian mode, and is used with its lowered fundamental as a second degree of the Aeolian mode. (See chapter on Ecclesiastical Modes.)

It may, however, be deemed advisable to call it a Neapolitan chord for the sake of giving it a name.

This triad is generally employed in its first inversion.

Bad. Good.

a II V

This altered triad may also be found in its fundamental position. (Chopin illustration, next page.)

Beethoven. Sonata c $\sharp$  Minor.

C $\sharp$  I II V $_7$  I

## Chopin. Prelude c Minor.

The triad on the second degree of the minor is frequently altered by raising the third and fifth (the fourth and sixth of the scale) a half-step, while the root remains stationary.

0 indicates raised fourths and sixths.

\* indicates lowered seconds.

## Beethoven. Op. 31. No. 1.

## 176. Altered Chords on Other Degrees.

There are many other ways of using altered chords; those given are the most frequently employed.

The following alterations lower the second, third, sixth and seventh, and raise the fourth of the major mode, and in the minor mode lower the second and seventh, and raise the third, fourth and sixth; the first and fifth of both modes are unaltered.

C I II III IV

V VI VII°

C I II° III' IV

V VI VII°

From the above it will be seen that the major and minor modes can have the same chords on each degree, though the diatonic chord of one mode is an altered chord of the other.

The same alterations will form altered sept-chords. The most frequently used are the altered  $V_7$ , with the seventh raised as a passing tone, and the  $VII_7^0$  with a lowered seventh. See SEC. III, p. 71.

### QUESTIONS.

- 172 What is an altered chord?  
 173 How is the augmented chord generally employed?  
 174 Are major and minor chords ever used as altered chords?  
 175 How is the second of a minor frequently used?  
 176 Name the altered chords which may occur on each degree of the major and minor modes.

EXERCISE:—Form cadences introducing altered chords in major and minor modes.

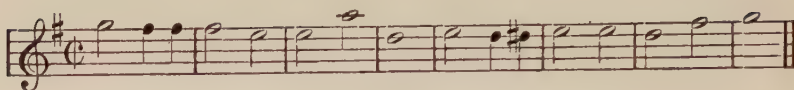
#### 1. Bass.

8 5# 5# 6 6 7

3 # 6 6 # 6 4 6 # # 5

6 # 6 5 4 3 6 5 6 4 # 6 5 7

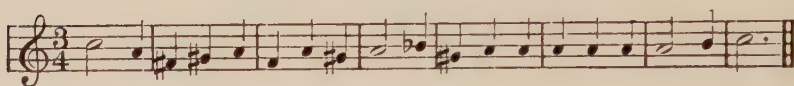
## 4. Soprano.



## 5.



## 6.



## Chapter XXVI.

## CHROMATIC CHORDS.

## 177. The Chromatic Triad.

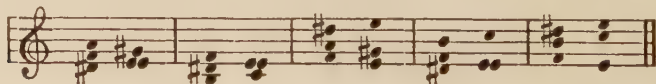
Previous alterations of chords have produced other chords which can be found in diatonic scales. There are other alterations that produce chords not found in the diatonic scale.

A chord containing a diminished or augmented third, or an augmented or diminished sixth, is a *Chromatic Chord*, as these intervals are not found in the diatonic scale, and require the use of a chromatic alteration.



## 178. The Resolution Tones of Chromatic Chords.

In the resolution of a chromatic chord, the two tones receiving the first consideration are those forming the chromatic interval. As a general rule the augmented tone ascends one diatonic degree, and the diminished tone descends one diatonic degree; i. e., the two tones, if a third apart, resolve to a unison; or if inverted, forming an augmented sixth, resolve to an octave.

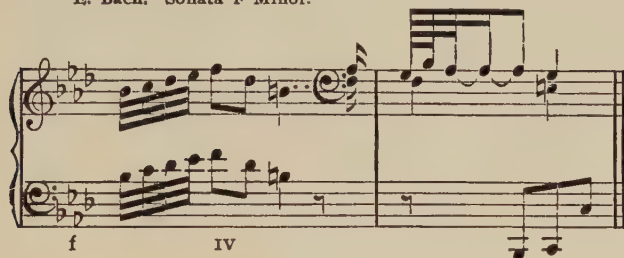




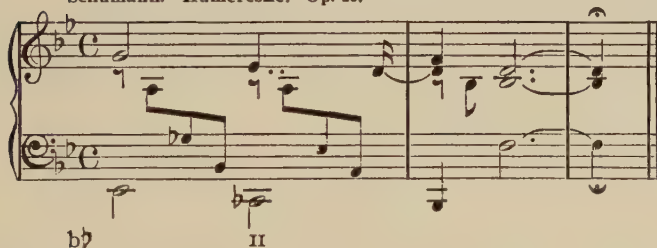
## 179. The Augmented Sixth Chord (Double Diminished).

The triad containing a diminished third and diminished fifth, formed by raising the root of a minor triad, is an altered chord frequently employed. This chord is called the *Double Diminished Triad*, and is generally employed on the fourth degree of the minor. It may occur on other degrees (see second quotation).

E. Bach. Sonata F Minor.

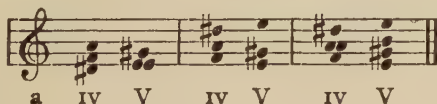


Schumann. Humoreske. Op. 20.



The only tone of this chord which can be doubled, in four-part writing, is the fifth. In four-part writing this chord is not practical as a fundamental chord. It can be used with most satisfactory results in its first inversion, which forms the chord known as the *Augmented Sixth Chord*.

The resolution of this triad is conditioned by the two dissonant intervals, the diminished fifth and its inversion—the augmented fourth, and the diminished third and its inversion—the augmented sixth. The root, which is chromatically raised, ascends one diatonic half-step; the third descends one diatonic degree; the fifth descends one diatonic half-step, or if doubled, one voice ascends a whole step.



The ordinary resolution of the double diminished or augmented sixth (IV) will always contain two tones of the dominant; and if inverted, with the fifth doubled, the ordinary resolution is into the complete dominant triad.

Any diatonic triad may be changed to a double diminished, or an augmented sixth chord, by half-step progression.

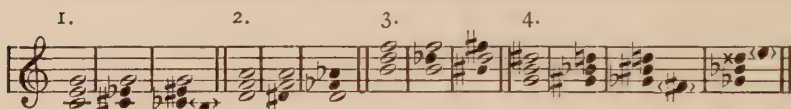
A major triad can be changed to a double diminished by raising the fundamental and lowering the third, or by lowering the fundamental and raising the third. *Ex. 1.*

A minor triad can be changed to a double diminished by raising the fundamental, or by lowering the third and fifth. *Ex. 2.*

A diminished triad can be changed to a double diminished by lowering the third or by raising the fundamental and fifth. *Ex. 3.*

An augmented triad can be changed by lowering any two tones and raising the other. *Ex. 4.*

Enharmonic changes must be considered in a number of the following alterations:



The above is especially useful in modulation.—See *CHAP. XXIV.*

## 180. Chromatic Triads containing an Augmented Third.

Triads containing augmented thirds are rarely employed, excepting as passing tones. Augmented thirds may be used in connection with large, small or diminished thirds.

Schubert. Sonata C Minor.



## 181. An Augmented Three-Four-Six Chord.

The three tones forming the double diminished triad are found in two sept-chords; by adding a third below, it produces the sept-chord, generally on the second degree of the minor; and by adding the third above, it produces the sept-chord on the fourth degree of the minor.

The first chord, when used in its second inversion, will produce a formation containing a large third, augmented fourth and sixth. The ordinary resolution of this sept-chord, like other sept-chords, progresses to the triad a fourth degree above or a fifth degree below; this resolves into the dominant triad. The resolution may be direct, as at "a", or interrupted by another chord, as at "b".

Two musical examples, 'a' and 'b', showing chord resolutions. Example 'a' shows a progression from a second inversion sept-chord (II<sub>7</sub>) to a dominant triad (V) and then to a tonic triad (I). Example 'b' shows a progression from a second inversion sept-chord (II<sub>7</sub>) to a tonic triad (I), then to a dominant triad (V), and finally to a tonic triad (I). Asterisks (\*) mark the initial chords in both examples.

Whenever the large or small sixth of any three-four chord is changed to an augmented sixth by the introduction of chromatic signs, it becomes one of the chromatic chords, called an *Augmented Three-Four-Six Chord*.

A musical example showing a progression of chords: E (tonic), V<sub>7</sub> (dominant seventh), A (augmented triad), II<sub>7</sub> (second inversion sept-chord), and V (dominant). An asterisk (\*) marks the augmented triad (A).

The above example proves that an augmented three-four-six chord may be built on other degrees than the second of the minor.

## 182. The Chord of the Augmented Five-Six.

The sept-chord upon the augmented fourth degree of the minor containing the tones of the double diminished triad, i. e., the raised fourth in the minor, which is the fundamental of this sept-chord, is a formation very common in composition. The first inversion of this sept-chord gives a large third, perfect fifth, and augmented sixth. This chord is called the *Augmented Five-Six Chord*.

Diagram showing the chord of the Augmented Five-Six in its various forms. The notation includes the chromatic form and three inversions (1st, 2nd, 3rd). Fingering is indicated by numbers 4, 5, 6, 3, and 2.

	Chromatic.	1st.	2nd.	3rd.
Fingering	4	5	6	3
Interval	IV	—	—7	—6
Interval	—	—	—	4
Interval	—	—	—	4

The ordinary resolution of the augmented five-six chord results, like the augmented three-four and augmented six-chord, into the dominant; however, the direct resolution will produce the parallel fifth, as at "a". This can be avoided by resolving the augmented five-six chord into (1) the augmented sixth chord, as at "a"; or (2) the augmented three-four chord, as at "b"; or (3) the four-six chord of the tonic, as at "c".

a                      b                      c

a   IV<sub>7</sub>   V        IV<sub>7</sub> IV   V        IV<sub>7</sub> II<sub>7</sub> V        IV<sub>7</sub> I   V   I

The augmented five-six chord may occur on other degrees than the fourth of the minor.

g                      D                      VII<sub>7</sub><sup>0</sup>

G                      IV<sub>7</sub>

### 183. Sound of Augmented Six and Five-Six Chords.

An augmented sixth chord sounds like a dominant sept-chord with the fifth omitted, while the augmented five-six chord sounds like a complete dominant.

a IV    a IV<sub>7</sub>    B<sup>b</sup> V<sub>7</sub>  
Aug. 6. Aug. 5-6.

These chords are very practical, and they may be introduced freely, providing the leading of the voice is good, and it is not necessary that they should be preceded by the same formation without chromatic alteration. Besides the ordinary resolution given for these chords, there are many possibilities in their resolutions. Such chords prove very useful in modulation, which will be considered in the chapter on that subject.

Quotations introducing chromatic chords.

Mozart. Don Juan.



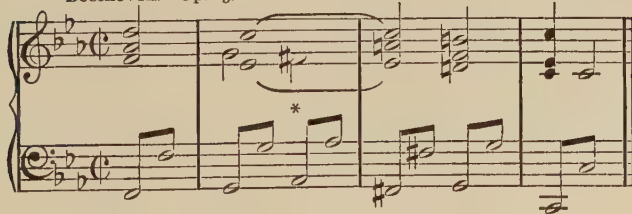
Beethoven. Prometheus.



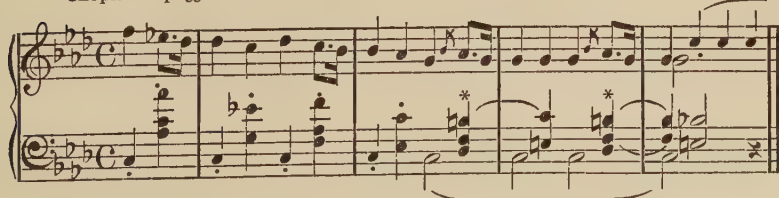
Schubert. Sonata.



Beethoven. Op. 13.



Chopin. Op. 55.



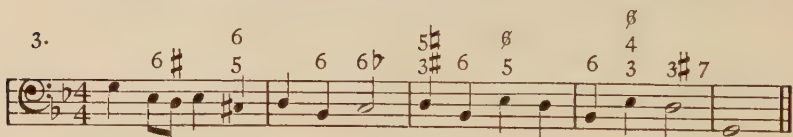
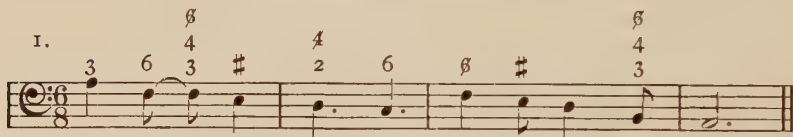


Haydn. Creation.

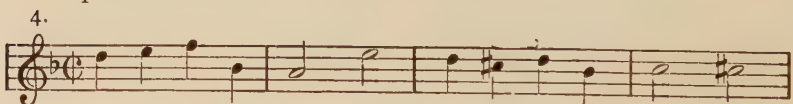


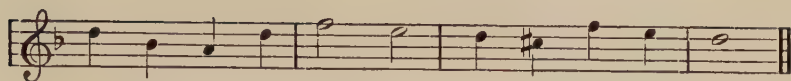
## QUESTIONS.

- 177 What is understood by a chromatic chord?
- 178 Which tones in a chromatic chord must receive first consideration in a resolution?
- 179 What is the double diminished triad? What is an augmented sixth chord? Give the ordinary resolution of the augmented sixth chord.
- 180 Are augmented thirds employed in triads?
- 181 What is the augmented three-four-six chord? What is its resolution? Where is it generally employed? May it occur on other degrees?
- 182 What is the augmented five-six chord? Give its ordinary resolution.
- 183 What is the sound of an augmented five-six chord? What is the sound of an augmented six chord?

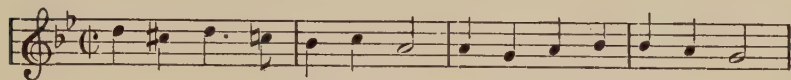


Soprano.





5.



## Chapter XXVII.

### SUSPENSIONS.

#### 184. Suspensions.

In the chapter on embellishments it was found necessary to suggest the subject of *suspensions*; however, as only a suggestion was given, this very important subject must be given careful consideration.

A suspension is a tone foreign to the harmony which has been prolonged from one of the tones in the preceding chord; i. e., a suspension may be regarded as a tone not belonging to a chord, but as a substitute for the omitted tone which follows.



The three considerations necessary concerning a suspension are: First, the preparation; second, the suspension itself; and third, the resolution.

## 185. Preparation and Resolution.

*A suspension should be prepared and resolved one diatonic degree.*

Any tone of a chord may be prepared as a suspension. Such preparation generally occurs on an unaccented beat, which throws the suspension itself upon the accented beat, and the resolution, in turn, upon the unaccented beat of the measure.

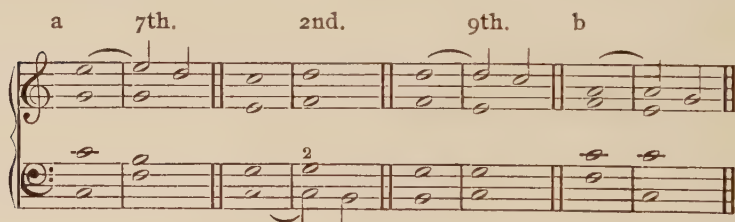
In the above example, at I, the suspension is prepared by the root above the root, the preparation "a" falling on C, and the C is a suspension at "b"; at "c" the resolution is B. At II the fifth is suspended, and at III the third is the suspension. However, suspensions may occur upon an unaccented beat.

Suspensions do not remove the objection to parallel fifths and octaves.



## 186. Intervals Forming Suspensions.

Sevenths, seconds and ninths are intervals which form good suspensions, as at "a;" other intervals are not as well suited for suspensions, as they are weak and lacking in character, "b."



## 187. Suspensions above the Root, Third, Fifth and Seventh.

A suspension may be prepared by any tone of a chord, and may also occur above any tone of a chord. When the suspension occurs before the root of a chord, care should be taken to have the preparation at least a distance of a ninth from the resolution tone with which it is sounded, as the two tones should never appear within an octave.

A suspension above the *root* may be prepared by the fundamental (a); third (b); fifth (c); and seventh (d).

a                      \*                      b                      c                      d

C VI V                      II I                      IV V<sub>7</sub>                      II V                      VII<sup>0</sup><sub>7</sub> V

\* This suspension could be classed as a chord of the ninth, but it has more the character of a suspension.

A suspension may occur above the third. Preparation of this suspension should always be at a distance of a ninth from the resolution tone with which it is sounded. Suspensions above the third may be prepared by a fundamental (a); third (b); fifth (c); and seventh (d).

a                      b                      c                      d

C I V<sub>7</sub>                      VI V                      VII<sup>0</sup> V                      V<sub>7</sub> I

Suspensions above the fifth may be prepared by the fundamental (a); the third (b); the fifth (c); and the seventh (d).

a                      b                      c                      d

A suspension above the seventh is impossible connecting the sept-chords of a key, as a suspended tone will occur as an octave, which is not a dissonant interval, nor is it foreign to the harmony. Suspensions above a sept-chord may occasionally occur in modulation.

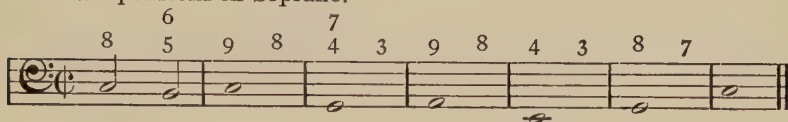




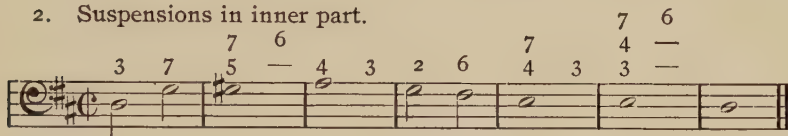
EXERCISE:—Write the upper parts to the following basses.

In the first of the following exercises, the suspension will be in the soprano; in the second, the inner part will have the suspension; in the third exercise, the suspension will be introduced in the bass.

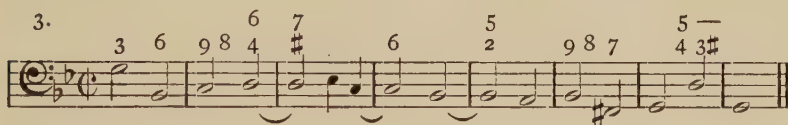
1. Suspensions in Soprano.



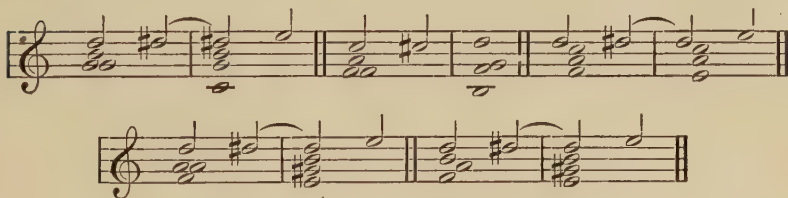
2. Suspensions in inner part.



3.



Suspensions from below are satisfactory in the augmented intervals of the chromatic chords.

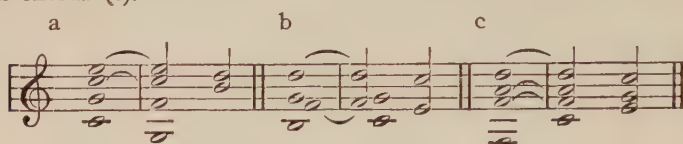


## 188. Suspensions in Two or Three Parts.

Suspensions are often used in more than one voice at a time; the diminished fifth or its inversion of the two tones forming the melodic intervals, and each has a decided melodic tendency. The two tones forming the diminished fifth may be employed as double suspensions, one from above and one from below, whenever they occur in a triad or sept-chord.



Double and triple suspensions may occur where any two voices descend in thirds (a), or sixths (b), or the three voices descend in sixth chords (c).



### 189. Unprepared Suspensions.

It often occurs that a suspension may enter free; i. e., not tied or held in the preceding chord. Such examples have the form of appoggiaturas. (See the quotations from Chopin, Op. 44, and Stainer, "Crucifixion.")

### 190. Unresolved Suspensions.

It is often the case that a melodic tone appears as a suspension, but does not progress to the resolution tone. (See Abt, Op. 464, in the following quotations.)

### 191. Retained Suspensions.

A suspension may be continued through two or more chords. Such a continuation of a suspension is called a *Retained Suspension*.

The same rules are applied to a retained suspension as to a suspension that occurs with one chord only; i. e., the preparation must precede the suspension as a chordic tone; after the completion of the suspension, the resolution must move one diatonic degree to a chordic tone formed on the unaccented beat of the measure.

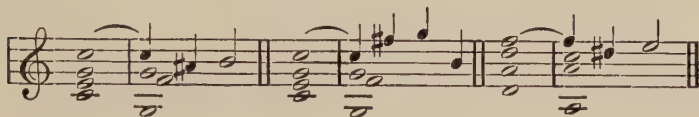


### 192. Interrupted Suspensions.

A suspended tone is often interrupted by another tone belonging to the chord in which the suspension is held before resolving to the chord above which it occurs.



The resolution of a suspension may be interrupted by tones foreign to the chord, as appoggiaturas to the resolution tone, or an appoggiatura to another chordic tone.



The resolution may be interrupted by passing tones, employed in passing to another tone of the same chord.



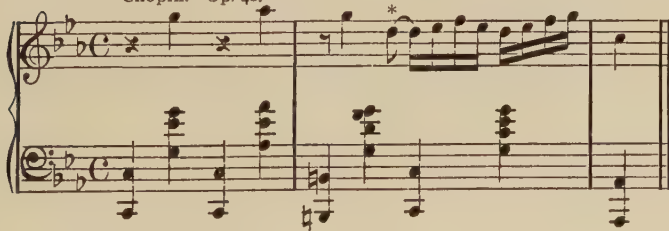
### 193. Suspensions from Below.

In certain cases, suspensions may be employed below a tone of the chord. Suspensions from below are satisfactory if the suspended tone has a natural inclination to ascend. Such inclinations are found wherever diatonic half-steps of the scale occur; i. e., on the third and seventh degrees of the major mode, and the second, fifth and seventh degrees of the minor mode.

Quotations showing suspensions:

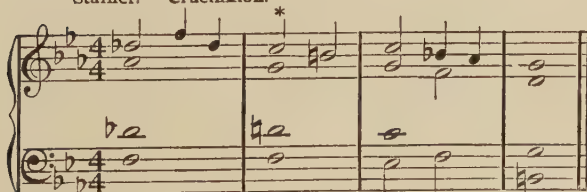
Suspension interrupted.

Chopin. Op. 48.



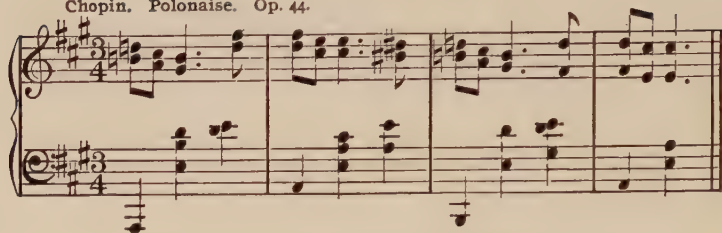
Unprepared.

Stainer. "Crucifixion."



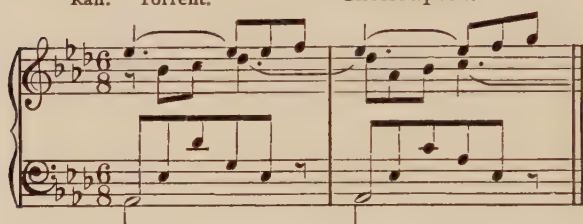
## Unprepared.

Chopin. Polonaise. Op. 44.



Raff. "Torrent."

Interrupted.



Abt. Op. 464. No. 2. Unresolved.



From below.

Verdi. "Aida."

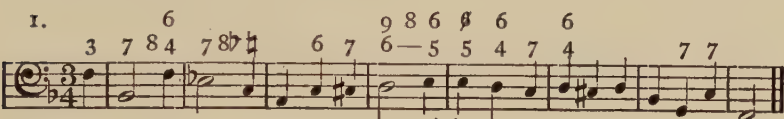


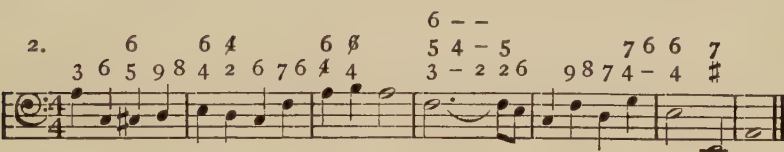
## QUESTIONS.

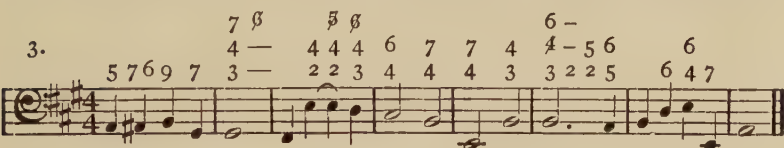
- 184 What is a suspension? What must be considered?
- 185 What is understood by preparation and resolution? Where does a suspension generally occur? May it occur on an unaccented beat? Do suspensions remove objections to established principles in part-writing?

- 186 What intervals are best to use as suspensions?  
 187 Which tones of a chord may form a preparation to a suspension?  
       Which may form the suspension?  
 188 May suspensions occur in more than one voice?  
 189 May they enter free?  
 190 Must they resolve?  
 191 What is a retained suspension?  
 192 What is an interrupted suspension?  
 193 When may suspensions occur from below?

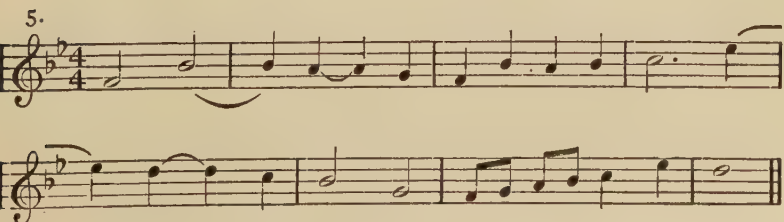
## EXERCISES:—

1. 

2. 

3. 

4. Soprano. 

5. 



## Chapter XXVIII.

### ANALYSIS.

#### 194. Harmonic and Melodic.

The analysis of a composition must be considered in two ways, harmonically and melodically. To be able to have a thorough understanding of the harmonic or melodic progression of a composition, a knowledge of keys, modes, chords and embellishments must first be attained.

Before attempting analysis, it would be well to review the location of chords, and the character of the different embellishments.

#### 195. Location of Chords.

Some few chords are definitely located; others are indefinitely located.

Chords definitely located:—

The augmented triad on the III degree of the minor; the small major sept-chord; the fifth of a major or minor; the diminished sept-chord on the VII degree of the minor; the large minor sept-chord; the I degree of the minor; and large augmented sept-chords on the III of the minor.

Chords indefinitely located:—

Major triads may be found in five different keys, the I, IV and V degrees of the major, and V and VI of the minor. A minor may be found in five different keys, the II, III and VI of the major, and the I and IV of the minor.

The diminished triad may be found on three degrees; the VII major or minor, and the II of the minor.

A large major sept-chord may be found on three degrees; the I and IV of the major, and the VI of the minor.

Small minor sept-chords may be found on four degrees; the II, III and VI of the major mode, and IV of the minor mode.

Small diminished sept-chords may be found upon two degrees, the VII of the major and the II of the minor.

#### 196. Embellishments.

A passing tone is a tone that is used in passing from one tone of a harmony to another tone of the same harmony.

An alternating tone is a tone foreign to the harmony, which follows the principal tone, and returns to the principal tone. Alternating tones may be above or below, and may be interrupted.

An *appoggiatura* is a tone foreign to the harmony, introduced upon the accented beat of the measure, either above or below, or preceding a tone of the harmony.

A trill is a repetition of alternating tones from above.

A mordant is an alternating tone from below. A repetition of alternating tones from below is a prolonged mordant.

A turn is a combination of two alternating tones, one from above and one from below.

Embellishments may be in one or more parts.

EXERCISE:—

Analyze standard compositions; the teacher may use his judgment as to selections.

## Chapter XXIX.

### MODULATION.

#### 197. Modulation.

A modulation consists in passing from one key to another. A modulation occurs whenever the character or tonality of a scale is changed by employing tones foreign to the scale, and by so doing establishing the character of another key or mode.

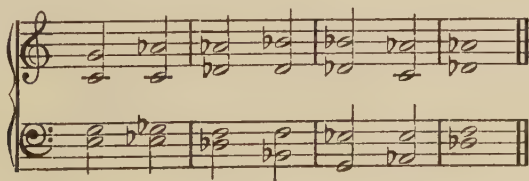
*A change of key does not in itself establish or constitute a modulation.*

A chromatic alteration does not necessarily indicate a modulation. The altered tone may be an embellishment, or one of the tones of either a chromatic or an altered chord.

A modulation may be perfect or imperfect.

#### 198. Perfect Modulation.

A *Perfect Modulation* consists of the gradual preparation of the new key, and it is required that the new key be thoroughly established by means of a cadence.



## 199. Imperfect Modulation.

An *Imperfect Modulation* does not definitely establish the new key, but only indicates it by tones or chords belonging to it.

G I e V<sub>7</sub> I a V<sub>7</sub> I D V<sub>7</sub> I G II V<sub>7</sub> I

A modulation may be so passing as to hardly deserve the name. Many alterations that are considered a modulation, should be simply considered as altered chords.

## 200. Chords which Establish a Key.

There are a few chords (discords) which in their regular resolution firmly establish the tonality and mode of a key:—the diminished triads, the dominant sept-chords, the sept-chords upon the seventh of a major and the second of a minor, and the diminished sept-chords.

## 201. Related Keys.

In order to modulate from one key to another, one must have a knowledge of the relationship that the keys bear to each other.

*Keys are related to each other in proportion to the number of tones which occur in both scales.*

As there are *seven* tones in a scale and *only twelve* tones in an octave, it is *impossible* to form *two* complete scales *without two or more* common tones. Two independent scales would require fourteen tones.

**REMARKS.**—This may be illustrated by using the twelve tones in the octave from C to C. The seven white keys form the scale of C major, and the five remaining black keys will form five of the tones of the scales of B, D-flat, F-sharp or G-flat. To complete either of the four scales it will be necessary to repeat two of the tones used in the C major scale.

When the tonics of two keys are one-half step or an augmented fourth apart, two tones are common. As there are five tones in each scale not found in the other scale, the keys are said to be five degrees removed.

When tonics are one-half step apart, the lower tonic and its perfect fourth are common.

In the case of C and D-flat, C, the lower tonic, and its perfect fourth, F, are common to the two scales. In the keys of B and C, B, the lower tonic, and its perfect fourth, E, are common.

When tonics are an augmented fourth apart, the leading tones of the two scales are common.

In the keys of C, F-sharp or G-flat there are two common tones, not notes. B, the leading tone of C, and F, the leading tone of G-flat, form the two common tones in C and G-flat, B occurring as C-flat in the key of G-flat. In the keys of C and F-sharp, F will occur as E-sharp in the scale of F-sharp. It will be noticed that the dissonant fifth will form the common tones between these two scales generally supposed to be the furthest removed.

When the tonics are an augmented fourth apart, one of the tones must be considered enharmonically. When the tonics are a whole step (two tones) apart, the keys are two degrees removed. Where keys are two degrees removed, five tones are common. The common tones are the upper tonic, its second, fourth, fifth and sixth.

In the scales of C and D major, D, E, G, A, and B are common. In the scales of B-flat and C major, C, D, F, G and A are common.

When the tonics are a small third (three tones) apart, they are three degrees removed. When they are three degrees removed, four tones are common. The common tones are the lower tonic, its second, fourth and fifth.

In the scales of C and E-flat, C, D, F and G are common; in the scales of A and C, A, B, D and E are common.

When the tonics are a large third (four tones) apart, the scales are four degrees removed. When the scales are four degrees removed, there are three tones common. The common tones are the upper tonic, its fourth and fifth.

In the scales of C and E, E, A and B are common; in A-flat and C, C, F and G are common.

When the tonics of two scales are a perfect fourth apart, they are one tone removed. When scales are one tone removed, the lower tonic, its second, third, fourth, fifth and sixth are common.

In the scales of C and F, C, D, E, F, G and A are common; in G and C, G, A, B, C, D and E are common.

### EXERCISES:—

According to the above explanation, the student should compare all scales with each other by taking the tonic of any scale as a center, as C major is compared with the above scales.

A major key is most nearly related to its relative minor, and to the minor key with the same tonic.

G major is related to g minor through the dominant sept-chord, which is the same in each mode. E minor has the same signature as G major, the only difference being that D is sharp in e minor and natural in G major.





## 202. Means Employed in Modulation.

In passing from one key to another, the essential means employed are:

- First. Chords indefinitely located.
- Second. Tones indefinitely located.
- Third. Enharmonic tones.
- Fourth. The irregular resolution of discords.

## 203. Principles to be Observed in Modulation.

First. A new key should be introduced with tones that are related to both keys, so that in passing from the original key to the new key, there will be no shock to the auditor.

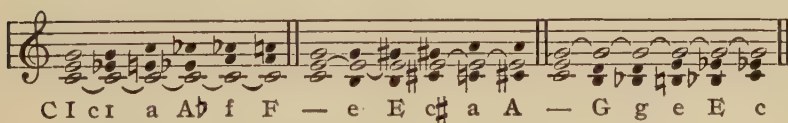
Second. Modulation should be a natural result of the melodic development of the composition.

Third. The modulation should occur at the end of a period or phrase, so that the new key will be established for the new period or phrase.

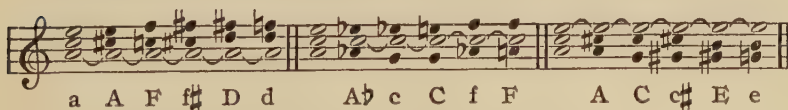
## 204. Tonic Related Keys.

The three tones forming the tonic triad, the root, third and fifth, may become the root, third or fifth of another tonic triad. This creates a relationship among keys which is called the *Tonic Related Keys*.

Tonic related keys to C major.



Tonic related keys to a minor.



This is another demonstration of half-step progression.

## 205. Mediating Chords.

It is sometimes desirable and effective to destroy the tonality of a key by introducing a chord entirely foreign to it. In this way the ear of the auditor is disturbed, and left in doubt as to the character of the key. Such a chord is called a *Mediating Chord*.

After the mediating chord is introduced, the new key is introduced.

From C to F $\sharp$  through A. C to f through A $\flat$ .

C I V<sub>7</sub> I A V<sub>7</sub> I F $\sharp$  V<sub>7</sub> I IV V I C I A $\flat$  I f IV I V<sub>7</sub> I

## 206. Modulation by Means of Common Triads.

A modulation may be introduced by means of one or more common chords. The tonic of a major mode may be regarded as the fourth or fifth of another major, or the fifth or sixth of a minor; likewise, a major chord in any key or mode may be regarded as a first, fourth or fifth of another major, or a fifth or sixth of a minor.

The major triad of C as a Dominant.

C I C I C I IV C I IV C I V

F V I f V I B $\flat$  V I b $\flat$  V I c V I

As a Sub-dominant.

As a Sub-mediant.

C I V C I V C I III C I IV C I V

G IV I D IV V<sub>7</sub> I e VI I a VI I b VI I

A minor triad may be regarded as the second, third or sixth of the major mode, or the first or fourth of the minor.

C I II C I II C I II C I II

B $\flat$  III I F VI I d I a IV I

A diminished triad may be regarded as the seventh of the major or minor key, or the second of the minor.

C I VII<sup>0</sup> C I VII<sup>0</sup>

c VII<sup>0</sup> I a II<sup>0</sup> V<sub>7</sub> I

An augmented triad may be used in modulation by irregular resolution, or by changing its notation.

C    a V<sub>7</sub>   I   C    IV d   V<sub>7</sub>   I   C I    e V<sub>7</sub>   I

C I    e V<sub>7</sub>   I   C I    b V<sub>7</sub>   I   C I    d V   I

## 207. Modulation by Half-Step Progressions.

When keys lack a common triad, and only common tones are found, students should bear in mind the principles of half-step progressions; i. e., the possibility of changing the major, minor, augmented or diminished triad into other major, minor, augmented or diminished triads; and they should also bear in mind the harmonic plural significance of each of the triads produced by such diatonic or chromatic half-step progressions.

*All keys have two tones common.*

C I   IV D<sup>b</sup> III I    B IV V<sub>7</sub>    g VII<sup>o</sup> I

## 208. Modulation Through the Dominant Sept-Chord.

The dominant sept-chord regularly resolves into the tonic triad, thereby establishing the tonality of the key and mode. By adding a small seventh to a major triad, a dominant sept-chord is formed. This is a very frequent means employed in modulation.

C I   D<sup>b</sup> V<sub>7</sub>   -D V<sub>7</sub>   -   E<sup>b</sup> V<sub>7</sub>   -   E V<sub>7</sub>   -F V<sub>7</sub>   -G<sup>b</sup> V<sub>7</sub>

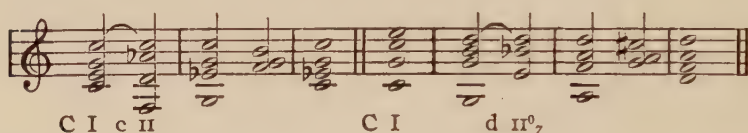
C I G V<sub>7</sub>   C I A<sup>b</sup> V<sub>7</sub>   C I A V<sub>7</sub>   C I IV B<sup>b</sup> V<sub>7</sub>    B V<sub>7</sub>

The student is expected to add a Cadence to each of the above examples.

In the treatment of the connection of sept-chords among themselves, it was found that a dominant sept-chord could progress to any other dominant sept-chord; the new sept-chord introduced may progress to its tonic, either in the major or minor modes.

### 209. Modulation Through the Small Diminished Sept-Chord.

The small diminished sept-chord upon the second degree of the minor resolves into the dominant sept-chord. A modulation from a major to a minor mode is easily produced by using the small diminished sept-chord. By using this sept-chord in its first inversion, and resolving irregularly, the four-six cadence with a new key and tonality is definitely established.



### 210. Modulation Through the Diminished Sept-Chord.

The diminished sept-chord is the mildest and weakest of all dis-cords. For this reason it is especially useful in modulation.

The following facts should be remembered concerning the diminished sept-chord:

First. Any tone of a diminished sept-chord may be regarded as a fundamental. This will, of course, necessitate changing the notation of the other tones.

Second. The diminished sept-chord may belong to the seventh of a minor, or the seventh of a major, when the sixth of the major key is lowered.

Third. In the diminished sept-chord a tone being regarded as a fundamental may progress to the minor or major triad a half-step above.

Fourth. The possibilities of half-step progression as given in Chapter XXIV.



With lowered 6th.

C I f VII°<sub>7</sub> I C I d VII°<sub>7</sub> I C I B VII°<sub>7</sub> I C I a b VII°<sub>7</sub> I

Modulations through the diminished sept-chord are very weak and undecided. For this reason it is well to fix the key by adding a perfect cadence.

## 211. Modulation Through Chromatic Chords.

The augmented sixth chord is frequently employed in modulation. The augmented sixth chord generally occurs as a first inversion of the triad upon the fourth degree of the minor. The augmented sixth chord resolves to the dominant. This dominant may resolve directly to a major or minor tonic, or may be treated as modulation through means of the dominant, as suggested in this chapter; i. e., by irregular resolutions of the dominant.

C I a IV V  $\rightarrow$  I C I III b IV V  $\rightarrow$  B I

The augmented five-six chord resolves, like the augmented sixth chord, into the dominant sept-chord. As it contains four tones, it is more decided and more satisfactory in modulation than the augmented sixth chord. The augmented 4-6 may resolve to its dominant, then to a major or minor tonic; or the dominant may resolve by irregular resolutions, as was suggested for the augmented sixth chord.

C I V<sub>7</sub> b IV<sub>7</sub> I V I C I V b IV<sub>7</sub> B I

## 212. Modulation by Means of Enharmonic Changes.

Tones may occur in two scales that have the same sound, but different notations. Such tones are very satisfactory in modulation, as, by means of enharmonic changes, keys that are distantly related may be agreeably brought together.

C I f i F<sup>#</sup> V<sub>7</sub> I C I A b i A V<sub>7</sub> I C I d VII°<sub>7</sub> B V<sub>7</sub> I



## 213. Modulation Through a Sequence.

A sequence is a very useful means of modulation, and is frequently employed on account of the repetition of the phrase, which is on a different key. The melodic sequence may be the same, while the harmonic construction may change in the repetitions.

### QUESTIONS.

- 197 *What is understood by modulation? Does a change of key necessarily constitute a modulation? Does a chromatic alteration?*
- 198 *What is a perfect modulation?*
- 199 *What is an imperfect modulation?*
- 200 *What chords definitely establish the tonality and mode of a key?*
- 201 *What is understood by related keys? How far removed can two keys be? What keys are five degrees removed from each other? When keys are five degrees removed, what tones are common? What major keys are one degree removed from any others? When keys are one degree removed, what are the common tones? What major keys are two degrees removed? When keys are two degrees removed, what are the common tones? What major keys are three degrees removed? When keys are three degrees removed, what are the common tones? What major keys are four degrees removed from any other? What are the common tones? Which major and minor keys are most closely related? Which minor keys are most closely related to each other?*
- 202 *What means are employed in modulation?*
- 203 *What principles must be observed in modulation?*
- 204 *What is meant by tonic related keys?*
- 205 *What is meant by a mediating chord?*
- 206 *How can you modulate by means of major triads? Minor triads? Augmented triads? Diminished triads?*
- 207 *How can a modulation be made when there is no common chord?*
- 208 *What diatonic sept-chords are useful in modulation?*
- 209 *What other chords are useful in modulation?*

### EXERCISE:—

By means of the common major chords in the key of G, modulate to the other keys, and make each modulation complete by the addition of the extended four-six cadence.

Modulate, by means of the common minor triads, from d minor to the keys in which the minor triads are found. Complete each modulation by adding the extended four-six cadence.

Modulate from e minor, by means of its diminished triad, to each key where these diminished triads are found.

Modulate, by means of the augmented triad and its irregular resolution, and change the notation.

Modulate, from the tonic triads, from A-flat major and e minor, through the dominant sept-chord, to the diatonically related key.

Modulate, from A major and c-sharp minor, by means of the small diminished sept-chord, to all other scales. Half-step progressions may be used.

Modulate, from the key of C to all other keys, by means of the diminished sept-chord. The diminished sept-chords must be introduced by half-step progressions.

Modulate, by means of the chromatic chords, from G major and d minor, to all other major and minor keys.

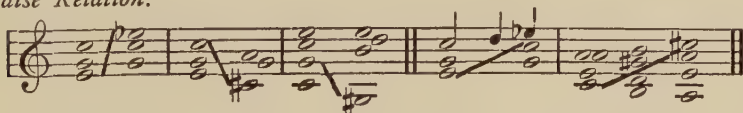
Modulate, from the key of E-flat and g minor, to other keys, by introducing enharmonic changes.

## Chapter XXX.

### CROSS RELATIONS.

#### 214. Cross Relations.

When in the connection of two chords a tone is chromatically raised or lowered in one of the chords, and used in its original position in the other chord, such a tone should be held in the same voice, otherwise you will have an unsatisfactory and unharmonious relation, which is called a *Cross Relation*, or as it is sometimes called, a *False Relation*.



#### 215. Cross Relations Not Always Faulty.

A cross relation is not always faulty, as in the following example, one, and sometimes two, of the tones form double appoggiaturas.



As it is possible to use cross relations with satisfactory results in so many ways, it is a difficult matter to establish rules as to their uses. All that can be said is that a cross relation should not be used when the effect is that of one key. The auditor must always have the feeling of two keys being used.

### QUESTIONS.

214 What is a cross relation? 215 Is a cross relation always faulty?

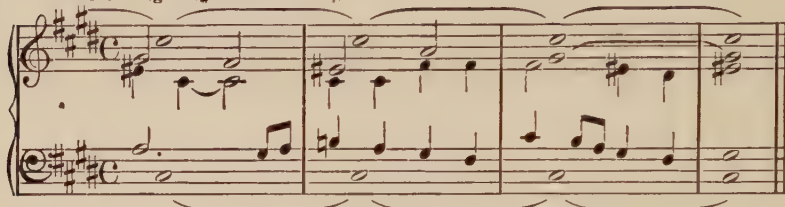
## Chapter XXXI.

### ORGAN POINT, OR PEDAL TONES.

#### 216. Stationary Tones.

*Organ Point*, or *Pedal Tones*, have been defined as tones sustained in one or more voices, while the other voice, or voices, progress through a succession of harmonies. While such a progression is a stationary tone, it does not necessarily indicate an organ point, or pedal tone.

Bach. Fugue c# Minor. No. 4.



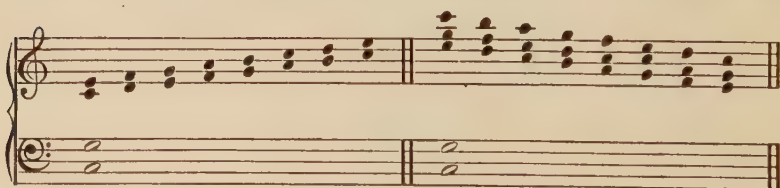
The rules governing stationary tones have differed so completely with different composers and theorists, that statements made for modern composers must be decidedly modified from those formerly given.

#### 217. Tones Used in Organ Point.

The tonic is the essential tone of the scale, and the dominant is next in importance. These two tones are the first tones of the two tetrachords (two halves) of the scale.



Either tone may be sustained while all the other tones are introduced as passing tones.



## 218. Facts Concerning Organ Point.

The important facts concerning an organ point, or pedal tone, are as follows:—

First. The organ point, or pedal tone, occurs on the dominant, or tonic.

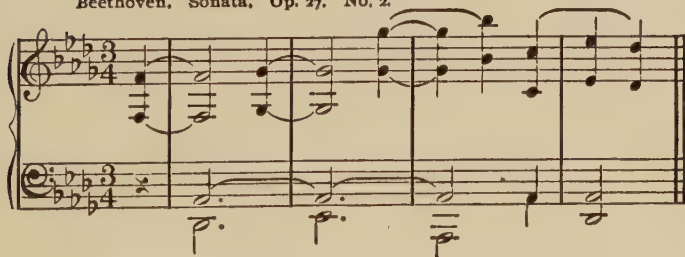
Second. The organ point begins and ends as a chordic tone; i. e., it should be a chordic tone of the first chord with which it is sounded, and also a chordic tone of the chord where the organ point is discontinued. However, there are exceptions to this principle.

Third. An organ point may occur in any part of a composition; or it may occur in any voice, though it is generally used in the bass.

Bach. Bourree II.



Beethoven, Sonata, Op. 27. No. 2.



Bach. Prelude No. 18.



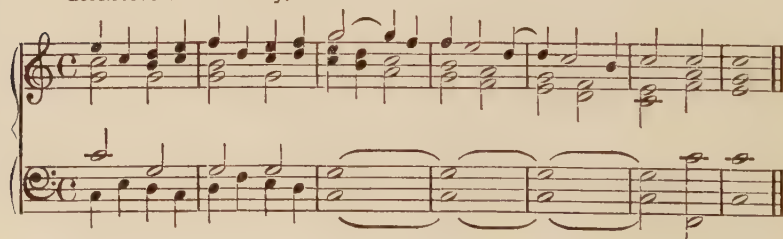
## Bach. Fuga XII.



## 219. Double Organ Point.

The tonic and dominant may be sounded simultaneously, and sustained while the other voices progress. The application of this double organ point necessitates the same consideration for each tone as does a single organ point.

## Brockhoven. "Harmony."





## 220. Stationary Tones on Other Degrees.

Other tones than the tonic and dominant may be used as stationary tones, although the occurrence is rare. Such sustained tones are not called organ point, but stationary tones. A stationary tone should begin and end as a chordic tone, the same principles governing stationary tones and organ point.

Organ point and stationary tones in three voices are not practical, although such attempts have been made.

### QUESTIONS.

- 216 *What is an organ point?*  
 218 *What are the principles concerning organ point? Which tones are satisfactory as organ point?*  
 219 *Does double organ point occur?*  
 220 *What are the principles concerning stationary tones?*

---

## Chapter XXXII.

### OTHER MODES.

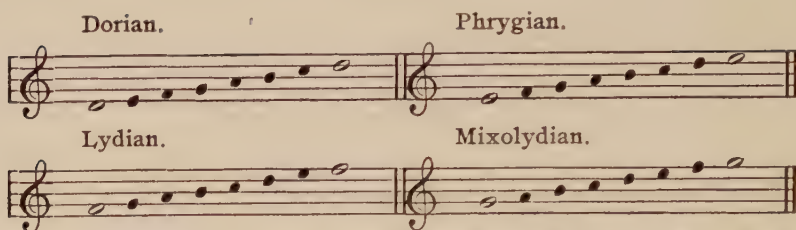
## 221. Other Modes.

Besides modern major and minor scales, there are many other modes used in music with which the pupil should be acquainted.

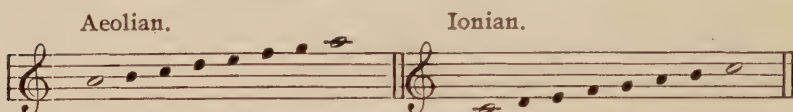
The Greeks had a system of modes, which will not be considered here, as they do not affect our modern form.

## 222. Ecclesiastical Modes.

The oldest modes which are used to-day are the *Ecclesiastical* (*Church*) modes. These modes were first used by St. Ambrose in the fourth century, and consist of a combination of five whole steps and two half-steps, but not arranged in the same order as modern scales. To get a clear understanding of the formation of these modes, it is best to compare them with modern scales. The four modes that were first used were the *Dorian*, *Phrygian*, *Lydian* and *Mixolydian*, which correspond to the series of tones, without chromatic alterations, beginning on D, E, F and G.



The *Ionian* and *Aeolian* modes were admitted later. The *Ionian* corresponds to the modern major mode, and the *Aeolian* is the same as the consistent minor mode.



A scale from B to B without chromatic alterations is not possible, as it does not admit of a tonic triad.

From the fundamental tone, through the octave, for each of these modes, a progression is formed called an *Authentic* mode. The modes, however, could be formed around the tonic, i. e., beginning on the dominant, and progressing to its octave. Such modes are called *Plagal* modes.

By comparing the six modes referred to, the tonic triads in three of the modes are major triads, so they can be compared to our major scale.

The other three forms can be compared to the minor scale, as their tonic triads are minor triads.



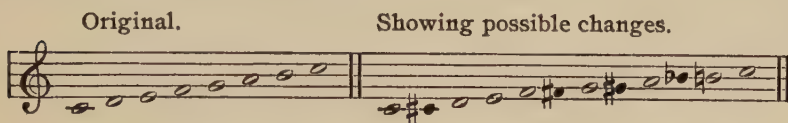
## 223. Chromatic Alterations.

In order to give a major possibility to each of the minor modes, the third of each could be raised, making it possible to admit of chromatic alteration of the first, fourth and fifth degrees of the *Ionian*, as these tones form the thirds of the *Aeolian*, *Dorian* and *Phrygian* modes. The *Mixolydian* mode, without chromatic alteration, had a small seventh in its original form. In this respect it was like the minor modes, so the third of this scale was given a chromatic alteration, making it possible to lower this tone, which would be the seventh of the *Ionian*.

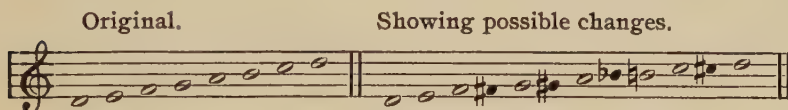
## 224. Essential Tones.

In each of the Ecclesiastical modes there are *Essential Tones*; i. e., tones which distinguish certain keys from other keys.

In the Ionian mode, the formation is the same as the major scale. By chromatic alterations, it may have an augmented prime, fourth or fifth, and a small seventh.



In the Dorian mode in its original form, the half-steps occur between the second and third, and sixth and seventh degrees. The chromatic possibilities are that the third, fourth and seventh may be raised, and the sixth lowered.

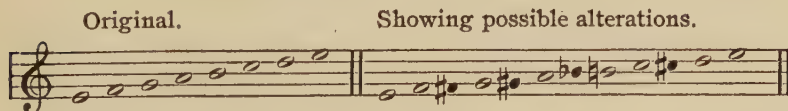


Example:—Beethoven. Op. 110. Adagio. *ab* minor. Signature six flats.

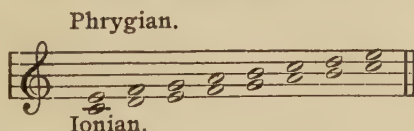
A composition written in the Dorian mode would be the same as our modern major, played on the second degree as the tonic.

Of the original four modes, the Dorian was the most frequently employed.

In the Phrygian mode in its original form, the half-steps occur between the first and second, and fifth and sixth degrees. The chromatic possibilities are: the second, third and sixth may be raised, and the fifth lowered.



The Phrygian mode is the weakest of the Ecclesiastical modes, as it lacks a dominant triad. It can be used most satisfactorily, in a harmonic sense, when placed with the Ionian.



In the Lydian mode in its original form, the half-steps occur between the fourth and fifth, and seventh and eighth degrees. The chromatic alterations possible are: the first, second, and fifth may be raised, and the fourth lowered.

Original.

Showing possible changes.



Example:—Chopin. *Mazurka*. Op. 29. No. 2. F major with no flats or sharps.

The Lydian scale closely resembles the Ionian, as the only difference is in its augmented fourth. The Lydian appears principally as a passing mode, introduced with other modes, particularly the Dorian.

In the Mixolydian mode the half-steps occur between the third and fourth, and sixth and seventh degrees. The chromatic possibilities are: the first, fourth and seventh may be raised, and the third lowered.

Original.

Showing possible alterations.



In the Aeolian mode the half-steps occur between the second and third, and fifth and sixth degrees. The chromatic alterations possible are: the second may be lowered, and the third, sixth and seventh may be raised.

Original.

Showing possible alterations.



Example:—Beethoven. Op. 26. *Marcia Funebre*. A $\flat$  minor. Signature seven flats.

The Aeolian mode is very similar to our modern minor. It is very satisfactory when used with a lowered second and raised seventh. It gives the major chord on the second degree, which resolves to its dominant. This chord, in its first inversion, was referred to as the Neapolitan Sixth Chord. (Section 175.)

The major triad on the second degree of the minor occurs in the Phrygian.



In the three major forms of the Ecclesiastical mode, the essential characteristics are: First, the Ionian and the Lydian have large sevenths, while the Mixolydian has a small seventh; Second, the Lydian has an augmented fourth, while the other two have perfect fourths.

The essential characteristics of the three minor modes are: the Dorian and Aeolian have large seconds, and the Phrygian small seconds; the Aeolian and Phrygian have small sixths, and the Dorian a large sixth.

The illustrations referred to are worth considering, as they will assist the student in comparing the modern music with the Ecclesiastical modes. In the folk-songs of all countries, and even in our American-Indian music, do we see the influence of the Ecclesiastical modes. All writers who have been influenced by *folk-songs* must necessarily introduce these Ecclesiastical modes in their compositions.

### 225. Scotch Scales.

The Scottish composers use many forms that are unlike those of other races. The earliest form is that which corresponds to our major mode, omitting the fourth and seventh; and the minor mode, omitting the second or sixth. The third or seventh of the major, and the second or sixth of the minor, was added, the small seventh being used.



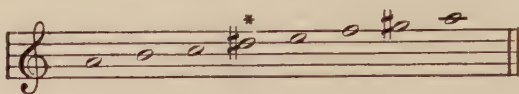
Other forms show the two scales completed with small sevenths. Later music written with large sevenths cannot be considered as having Scottish peculiarities, so far as the scale is concerned, as such melodies would correspond to our modern major and minor modes. It is supposed that the original form of five-tone melodies was introduced on the northern coast from China, and it was used by the five-tone bag-pipes. It has been supposed by some authorities that the short note followed by the long note was due to the construction of the bag-pipes, as it is easier to play their melodies in groups of two than to have their melodies played with the notes of equal length. In this respect the short note followed by the long note has the same peculiarity as the Hungarian music.

The student will find illustrations of all these modes in "The Lyric Gems of Scotland", by John Cameron, and other collections of Scotch songs. Many of the Scotch melodies are in the Ecclesiastical modes.

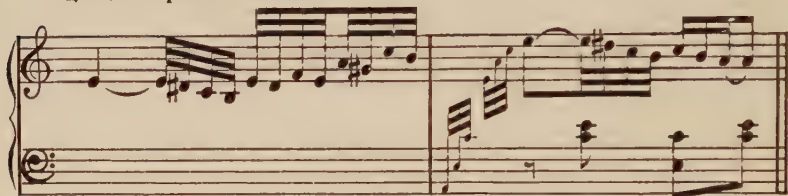


## 226. Hungarian Music.

The Hungarian scale is the same as the modern harmonic minor with the fourth raised. This scale was frequently employed by Brahms, Beethoven, Liszt, and others.

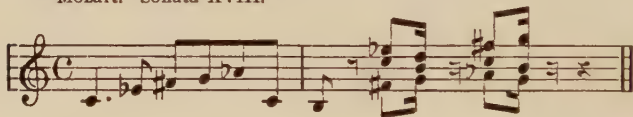


Liszt. Rhapsodie XIII.



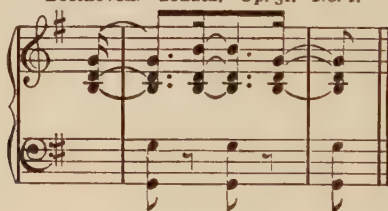
The essential characteristics of the Hungarian music, which may be the major or minor mode, are: First, a short rhythm; Second, a short note followed by a long note; Third, short phrases.

Mozart. Sonata XVIII.



The following illustrates the Hungarian rhythm in a major mode.

Beethoven. Sonata, Op. 31. No. 1.



## QUESTIONS

- 221 What other modes influence modern music besides the major and minor?
- 222 When were the Ecclesiastical modes introduced? Describe each.
- 225 What is the Scotch scale?
- 226 What is the Hungarian scale? What is the Hungarian rhythm?

## SUGGESTIONS FOR TEACHERS.

The author begs to make the following suggestions to teachers:

First cover the ground work of the harmony as fast as possible, so that the pupil may get a general prospective of the entire work: then follow with slow and thorough review.

For this reason it is suggested that in the first study the teacher give no unnecessary attention to part-writing. After the student is able to build all the diatonic chords, knows their location in the major and minor modes, understands the school of embellishments and the distinction between diatonic, altered and chromatic chords, and, having fundamental training in analysis, part-writing will then become very easy.

The young teacher should not attempt to teach all the articles in the book in the order in which they come.

To the inexperienced teacher the following suggestions will prove helpful:

Let the student become thoroughly familiar with major scales and intervals before teaching minor or chromatic scales. This will cause the omission of Articles 11 and 12 on pages 13 and 14. The author has sometimes found it advantageous to begin introducing the relationship of scales (see Article 201) before teaching chord formations.

Ear drills should begin with the first lesson and be continued in every lesson.

Begin ear drills by sounding one tone, and have the student indicate his ability to recognize it. Then have two tones carried by the ear. In starting two tone drills it is best to use tones a fifth apart.

In teaching half-steps and whole-steps teach them with ear drills. The same with scale formations and consonant and dissonant intervals.

After the table of intervals is thoroughly taught, teach minor and chromatic scales (pages 13 and 14). Then teach the location of seconds and thirds (Article 11, page 19), but do not teach the other intervals (page 20) until after the completion of Chapter IV. The average student has little trouble in learning the location of triads, so that by emphasizing the fact that major and minor triads have perfect fifths, augmented triads have augmented fifths, and diminished triads have diminished fifths, the location of fifths will be easy to learn.

By inverting the fifth, the location of the fourths will be made easy, e. g.; as there are ten places for major and minor triads, there will be ten locations for perfect fifths. A perfect fifth becomes a perfect fourth by inversion, so there must be ten locations for perfect fourths; as there are three locations for diminished fifths, there must be three locations for augmented fourths; there is only one location for an augmented fifth, so there is but one location for a diminished fourth. In the same way, i. e., by inverting the seconds, the sevenths are located, and by inverting the thirds the sixths are located. Emphasize ear drills with all intervals.

In teaching chord connections it is advisable at first to put little stress on the musical value of the various triads in connection with others, but rather to emphasize the first three fundamental principles (page 32).

The author has his students arrange their exercises in the following manner:

Use score books with four double staves; on page 2, line 1, place the tonic first, and have it followed by every other triad in the same key; using the fundamental of each in the bass, as in the exercise, Article 56. On page 3 of Exercise Book these chords are reversed, i. e., use the tonic as a chord to follow all triads, e. g.; II-I; III-I; IV-I; V-I; VI-I.

On page 4 use the supertonic first, and have it followed by all triads, fundamentals in the bass; on page 5 reverse the order, i. e., let the supertonic follow all chords. In this way, using two pages for every triad, it will require twelve pages of the score book for the major mode, and eight for the minor mode, using the top line only.

When inversions are taught, use the second line of each page for the same chords used in the first line, only have the second chord of each exercise a first inversion as shown in the first exercise on page 46. In the third line use the same chords, but have the first of each chord as a first inversion. In the fourth line use both chords as first inversions, as on page 47.

After all the triads of the major and minor mode are treated in this manner, study each connection to develop the musical taste, eliminating the connections which are bad, and write why they are bad. The student will then realize that many chords may be followed by certain chords which cannot so easily be preceded by the same chords.

The following suggestions will aid the students:

Avoid skips of a seventh, e. g.; move from c down to b, not up to b.

Avoid augmented skips in the bass, e. g.; it is bad to move from the fundamental of the IV up to the fundamental of the VII. It is good to move from a weak to a strong chord, but the reverse is bad. II to V is good; V to II is weak.

A characteristic difference between the tonic and dominant is, the tonic can be followed by, or may follow any triad in the same key the dominant may follow, but not be followed by any triad.

In ear drills play cadences; also show characteristics of key, as follows:

Two major triads a fifth apart must be in the major mode, either may be the tonic, e. g.; C and F major may be in the keys of C or F. Two adjoining major triads are in the major mode if a whole-step apart. If a half-step apart they are in the minor mode, as E and F sharp major triads are in the key of B major; but E and F major triads are in A minor.

A diminished followed by a minor must be the VII<sup>0</sup>-I of the minor mode; if followed by a major it must be the VII<sup>0</sup>-I of a major mode.

In this way many characteristic combinations will be found by the teacher introducing different progressions which will assist the student to recognize keys and modes.

What has been suggested for triads should be continued for sept-chord drills.

If the student is slow, it may be well to give additional written work, and the author suggests that suitable material for such can be found in "Richter's Additional Exercises".

After the student is familiar with the formation of sept-chords, simple chorals and piano compositions should be harmonically analyzed. As progress is made, more difficult compositions should be analyzed. These should introduce the embellishments and different chords which have been studied.

The chapter on embellishments (Chap. XIX) may be introduced any time after inversion of triads, as it will aid in analysis, and the same is true of Chapter XXI.

The half-step progression begins the second part of the work; with older students it is well to introduce the subject along with sept-chords.

The author has found the following method good in visualizing half-step connections.

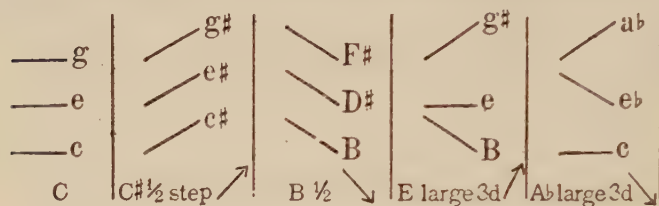
(—) indicates the same tone.

(/) indicates the original tone raised a half-step.

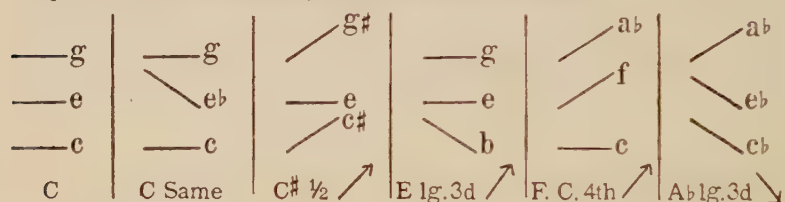
(\ ) indicates that the original tone is lowered a half-step.

(↗) indicates above (↘) indicates below.

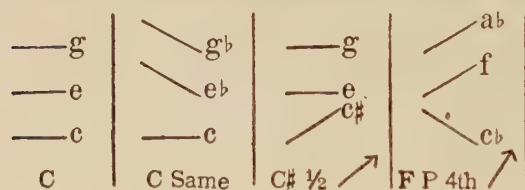
Connecting a major triad with a major triad.



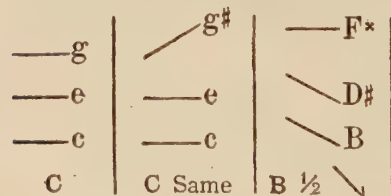
Major triad connecting with a minor triad.



Connecting major triads with a diminished triad.



Connecting the major triads with an augmented triad.





From the above it will be observed that, by using half-step progression, a major triad connects with four other major triads, which are located one half-step above, and one half-step below; one large third above, and one large third below, i. e., C major triad connects with D $\flat$  major (one half-step above C); B major (one half-step below C). E major (a large third above C) and A $\flat$  major (a large third below C).

This is true of all major connections. Sometimes enharmonic equivalents must be substituted, e. g.; A $\flat$  major triad will connect with A, G, C, and F $\flat$  (E) major.

Be sure and have the student understand this first group of major connections before attempting the connection of the minor, augmented or diminished triads.

Always keep in mind the plural significance, e. g.; in the above example, the original chord C major may be found as a diatonic triad in five keys, as it is in the key of C, G, or F major. For E minor form progression in each key so as to introduce the chord of C major, the progress by half-steps to one of the other major triads—a half-step above or below, or a large third above or below, then regard this chord as a new diatonic which may be in five keys.

This same idea should be continued throughout all half-step connections.

After altered chords are taught, combine the idea of half-steps and altered chords. Remember, a major chord may be in eleven keys as an altered triad.

It will be observed that all chords connect by half-step with other chords, either in the same degree, a half-step above or below, a large third above or below, or a perfect fourth above or below. Sometimes the enharmonic equivalent must be substituted.

## Table of Half-step Connections.

### MAJOR TRIADS.

#### 1. With major triads (four):

One half-step above or below, and a large third above or below.

#### 2. With minor triads (five):

On the same, one half-step above, a large third above or below, and a perfect above.

#### 3. With diminished triads (three):

On the same, one half-step above, and a perfect fourth below.

## 4. With augmented triads (one chord tonality):

One half-step below.

In the case of augmented triads, it must be remembered that each augmented triad may receive three notations. (Art. 35, page. 29.)

## MINOR TRIADS.

1. With *minor triads* (four):

One half-step above or below, and a large third above or below.

2. With *major triads* (five):

On the same, one half-step below, the large third above or below, and a perfect fourth below.

3. With *diminished triads* (three):

On the same, one half-step above, and a large third below.

## 4. With augmented triads (one chord tonality):

One half-step below.

## DIMINISHED TRIADS.

## 1. With major triads (three):

Same, one half-step below and a perfect fourth below.

## 2. With minor triads (three):

Same, one half-step below and a large third above.

## 3. With augmented triads (one chord tonality):

One half-step below.

## AUGMENTED TRIADS.

## 1. With major triads (six):

By lowering one tone it becomes the fifth of a major triad.

By raising two tones the tone retained becomes the fifth of a major triad.

2. With *minor triads* (six):

By raising one tone it becomes the root of a minor triad.

By lowering two tones the tone retained becomes the root of a minor triad.

## 3. With diminished triads (three):

Regarding any tone of the augmented triad as a fundamental and raise it a half-step and lower the fifth, a diminished is found.

## SMALL MAJOR SEPT-CHORD.

1. With *major triads* (two):

One half-step below, and a large third above.

NOTE:—In the case of small sept-chords the fundamental and seventh must move contrary by half-steps, which, if a seventh apart, will create an octave; if inverted, the fundamental and seventh will be a whole-step apart and will resolve to a unison.

2. With *minor triads* (two):

A large third above or below.

3. With a *diminished* (one):

A perfect fourth above.

4. With *augmented* (one):

One half-step below.

By reversing the sept-chord with triads, the triad connections with sept-chords are found.

Students can easily continue the table connecting sept-chords with triads and with other sept-chords.

Diminished sept-chords do not connect with triads by half-step connections only.

As this work is only elementary in dealing with the subjects of half-step progression, altered and chromatic chords, the teacher is advised to continue the study in Bernhard Ziehn's "Manual of Harmony" after completing this work. This work gives all that is necessary for the average good student, and after knowing the contents he can analyze any composition.

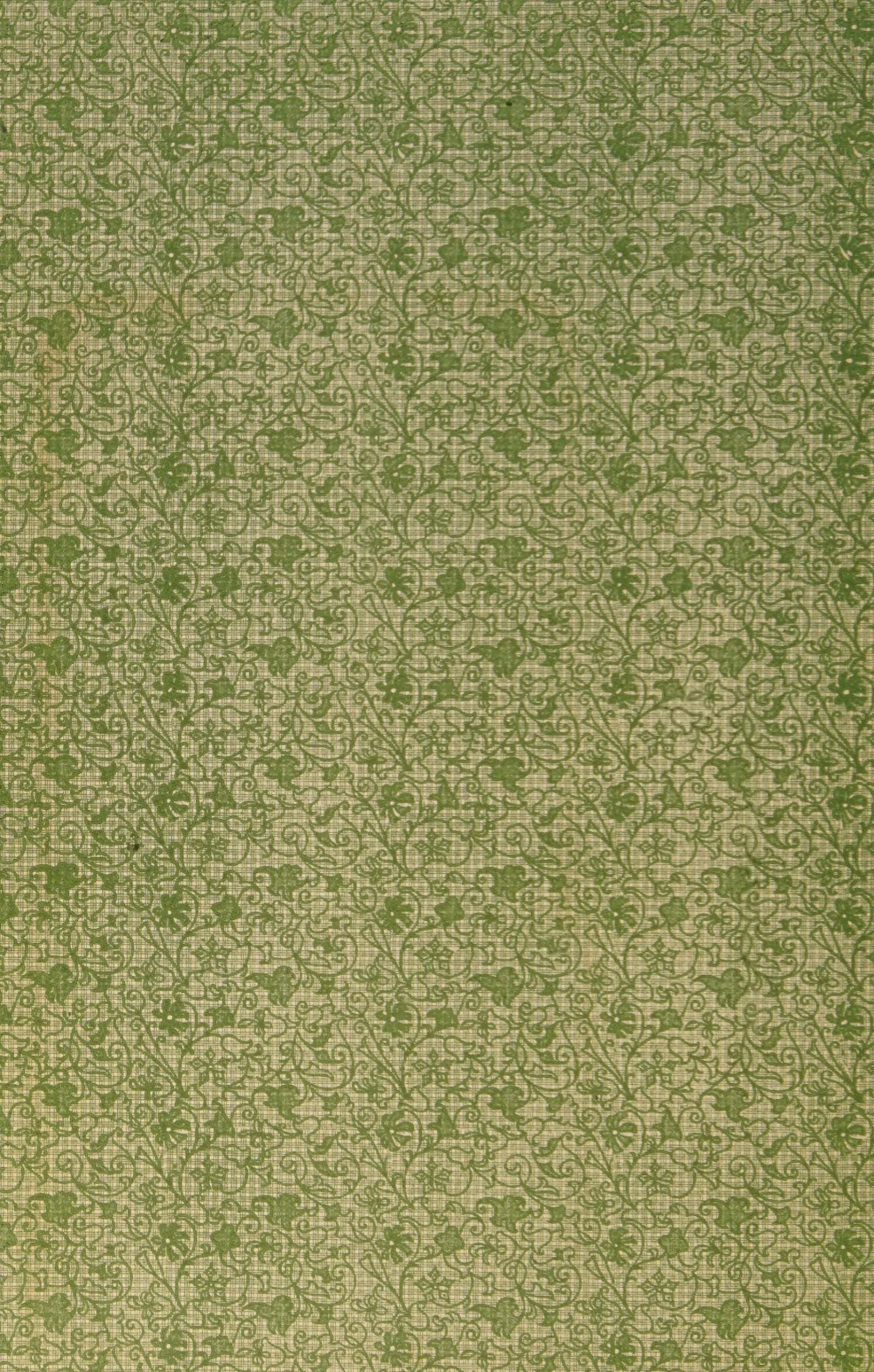
It is not intended to suggest that students should not thoroughly study voice leading; but after a thorough analytical sense is developed, the student who wishes to go into the study of melodic construction, counterpoint, etc., will find it very easy, and will save much time. As the average student has no possible application to make of these subjects, the author cannot see the use of sacrificing so much time in the study, which usually is never thought of after leaving the class. Every student should learn key-board harmony, ear training, practical analysis, transposition, modulation, musical form and instrumentation, and become familiar with art, literature, history, biography, and the fundamentals of philosophy and psychology. Students with creative faculties should add to this: melodic construction, advanced harmony, counterpoint and orchestration.





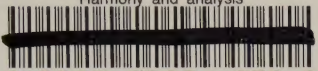








Main MT50.B806  
Harmony and analysis



3 3338 00054 670 0

~~781.3~~  
~~B611h~~

4104

